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KISAN PROJECT

REVISED ANNUAL WORKPLAN YEAR 3 — MARCH 1, 2015 – SEPTEMBER 30, 2015
CONTRACT NUMBER AID-367-C-13-00004

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CONTENTS

LIST OF FIGURES

LIST OF TABLES

ACRONYMS

AEC	Agro Enterprise Center
AFSP	Agriculture Food Security Project
APS	Annual Program Statement
AT	Agriculture Technician
BDSO	Business Development Services Officer
CC	Collection Center
CBO	Community-Based Organization
CEAPRED	Center for Environmental and Agricultural Policy Research, Extension and Development
COP	KISAN Chief of Party
COR	Contracts Officer Representative
CSISA	Cereal Systems Initiative for South Asia
DADC	District Agriculture Development Committee
DADO	District Agriculture Development Offices
DC	District Coordinators
DCOP	KISAN Deputy Chief of Party
DDC	District Development Committee
DEPROSC	Development Project Service Center
DIP	Detailed Implementation Plan
FINGO	Financial Intermediary Non-Governmental Organization
FTF	Feed the Future
GATE	Global Agri-Tech Nepal
GESI	Gender Equality and Social Inclusion
GIS	Geographic Information System
GON	Government of Nepal
GUC	Grants under Contract
ICT	Information and Communication Technology
IFPRI	International Food Policy Research Institute
IPM	Integrated Pest Management

IPM-IL	Integrated Pest Management – Innovation Laboratory
IR	Intermediate Result
IT	Irrigation Technician
KISAN	Knowledge-based Integrated Sustainable Agriculture and Nutrition Project
LSP	Local Service Provider
MFI	Micro Finance Institution
MOAD	Ministry of Agriculture Development
MPC	Market Planning Committee
MS	Marketing Supervisor
MUS	Multiple Use of Water Systems
NARC	Nepal Agriculture Research Council
NGO	Non-Governmental Organization
NPAC	National Project Advisory Committee
NRS	Nepali Rupees
PCV	Peace Corps Volunteer
PO	Program Officer
PPP	Public Private Partnership
RISMFP	Raising Income of Smallholder Farmers Project
SACCO	Savings and Credit Cooperative
SQCC	Seed Quality Control Center
STTA	Short-Term Technical Assistance
SWOT	Strength, Weakness, Opportunity, and Threat
TOT	Training of Trainers
USAID/Nepal	United States Agency for International Development in Nepal
USG	United States Government
VDC	Village Development Committee
WI	Winrock International

EXECUTIVE SUMMARY

This document, along with the accompaning M&E plan, describes the activities that the KISAN Project will undertake from March 1 to September 30, 2015, an extended part of the third year of the project.

This revised Year 3 Annual Workplan has incorporated the following into its activities and approach:

- A clearer and more distinct approach on how the program will work with the private sector to increase smallholder farmers' income within the four commodities.
- Better alignment with the Bureau of Food Security and USAID's interest in sustained change by narrowing the project's focus to result in transformational change.
- Alignment with Modification 7, which adjusts the project's year to the US fiscal calendar (October 1 – September 30) and adjusts the project's presence in all 20 districts for life of project.
- Elaboration on activities KISAN must do to correct for the lack of baseline and project data.

The project plans to work with the private sector at multiple levels (companies to traders) to develop sustainable solutions for training and engaging smallholder farmers in producing for markets to increase their income from agriculture and their gross margins in the four subsectors – rice, maize, lentils, and high-value vegetables. KISAN will continue to strengthen change agents and Marketing and Planning Committees in all 20 project districts and to establish key linkages among farmers, input suppliers, and companies (seeds, water/irrigation, credit). KISAN will also continue to provide support to farmers to adopt and expand the use of improved production and post-harvest technologies and practices.

KISAN will work in Kapilvastu, Argakhachi, Palpa, Gulmi, Pyuthan, Rukum, Rolpa, Banke, Bardia, Dailekh, Jajarkot, Surkhet, Salyan, Dang, Kailali, Kanchanpur, Baitadi, Accham, Doti, and Dadheldhura.

I. INTRODUCTION

Winrock International (WI) received a contract from the United States Agency for International Development in Nepal (USAID/Nepal) for the Knowledge-based Integrated Sustainable Agriculture and Nutrition (KISAN) Project on February 14, 2013. The project followed the Government of Nepal (GON) calendar for the first two years of the project and is now following the US government fiscal calendar. Thus, Year 1 was from February to June 30, 2013; Year 2 was from July 1, 2013 to June 30, 2014. The extended Year 3 is from July 1, 2014 to September 30, 2015. A Y3 workplan was submitted and preliminarily approved in July 2014 and modified again in August 2014 to include food recovery work. USAID requested that Winrock submit a revised workplan, revised M&E plan, revised Section C (Statement of Work), and cost proposal in February 2015. This report replaces and extends activities described in previous Y3 workplans from March 1 to September 30, 2015. Activities between July 2014 and February 2015 are covered under the previous preliminarily approved workplan.

The KISAN Project is part of the Feed the Future (FTF) Initiative and is the flagship food security project of USAID/Nepal. The project's overall goal is to sustainably reduce poverty and hunger in Nepal by achieving inclusive growth in the agriculture sector and increasing the incomes of farm families. The project is implemented in collaboration with two Nepali organizations as subcontractors: Development Project Service Center (DEPROSC) and Center for Environmental and Agricultural Policy, Research, Extension and Development (CEAPRED). The KISAN Project has five specific outcomes:

COMPONENT A: IMPROVED AGRICULTURAL PRODUCTIVITY

Outcome 1: Improved access to increased quality inputs for farmers.

Outcome 2: Improved capacity of agriculture extension workers, service providers, and farmers.

Outcome 3: Improved and sustainable agriculture production and post-harvest technologies and practices adopted at the farm level.

Outcome 4: Improved market efficiency.

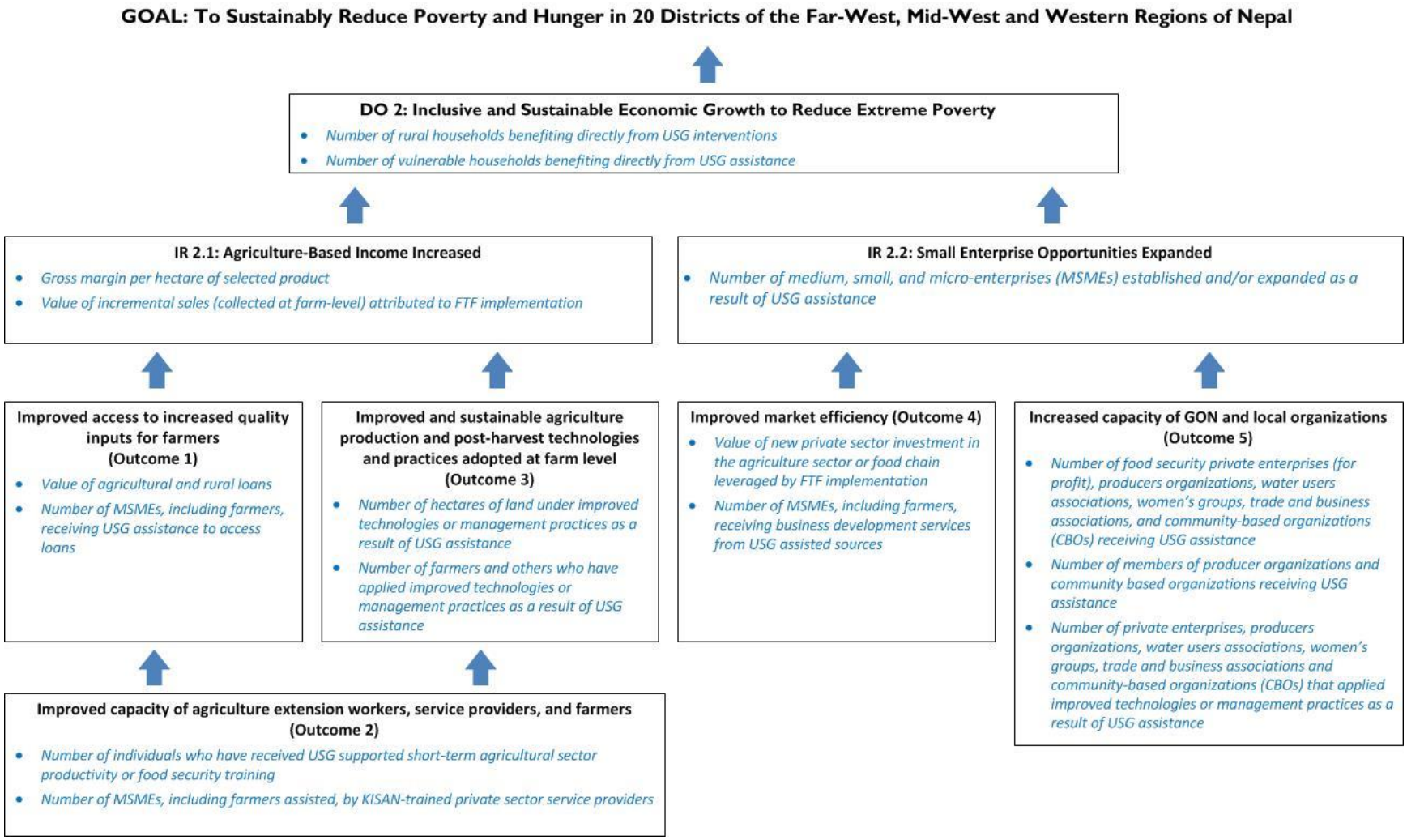
Outcome 5: Increased capacity of GON and Nepali organizations for agriculture-related technology identification and dissemination.

As per the contract (Section C.4.8.6), Winrock is required to develop and submit an Annual Workplan to the USAID/Nepal Contract Office Representative (COR). The workplan begins with an overview of the project and how the project will achieve the development objective. It then provides a brief overview of the modified value chain (hereafter referred to as commodity chain) approach for each of the four commodities: rice, maize, lentils, and high-value vegetables. Activities are organized by Development Objective, Intermediate Results (IRs), and Outcomes to clearly demonstrate how they contribute towards achieving contract objectives. For each activity, the workplan provides a brief description of the activity, benchmarks, required resources, entity responsible, expected time frame, as well as any critical assumptions. The performance targets presented in this workplan will be re-evaluated, and if necessary, modified through discussions with the COR, following the completion of the ongoing FY14 data survey. The workplan addresses gender equality and social inclusion (GESI) issues and approaches for managing the project to ensure the components are fully integrated.

The workplan annexes include a table that shows the activities, organization responsible, and timing; commodity and input supply chain strategies; and a list of technologies KISAN will promote.

Figure 1 below presents the KISAN Results Framework.

Figure 1. KISAN Results Framework



ACHIEVING CONTRACT OBJECTIVES

THEORY OF CHANGE

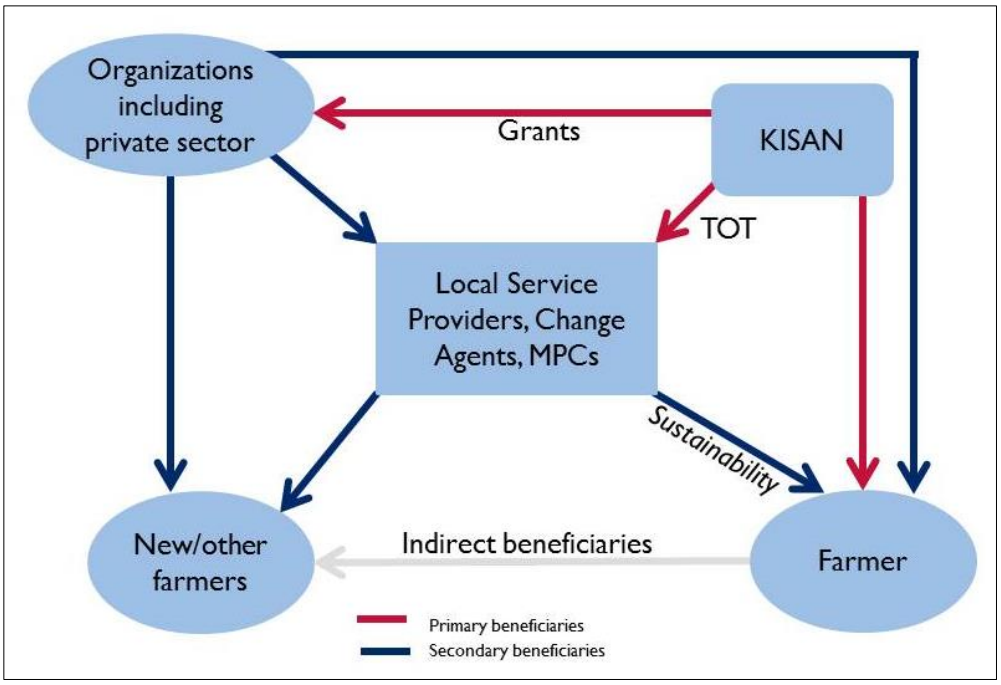
When smallholders access skills, knowledge, inputs, and markets, they are able to engage in commercial agriculture and increase their incomes. If smallholders also attain entrepreneurial literacy, they will more likely invest their income in products and services that increase productivity of both high-value vegetables and traditional crops (rice, maize, lentils) for market sales and home consumption. In remote areas where crops are not commercialized, if these same farmers earn income through selling vegetables and adopt new technologies to raise high-value agricultural products, they will be more likely to invest in new technologies to increase the productivity of rice, lentils, and maize for home consumption.

When smallholders aggregate products, transaction costs are lowered, attracting buyers and enabling farmers to earn better prices.

Agribusinesses can increase their supply of rice, maize, lentils, and certified seeds (for buyers) and sales (for input suppliers) by conducting demonstrations and by training farmers on improved methodologies that lower the cost of production and/or increase the quality of the product.

Figure 2 below illustrates the KISAN Project's training pathways and how KISAN will reach primary and secondary direct beneficiaries.

Figure 2. KISAN Training Pathways



OVERALL APPROACH

The overall goal of the KISAN Project is to sustainably reduce poverty and hunger in Nepal by achieving inclusive growth in the agriculture sector, increasing the incomes of farm families, and improving

nutritional status, especially of women and children. USAID/Nepal will implement the project over a four-and-a-half-year period through an integrated, whole-of-government approach that includes strategic agriculture investments supporting contributions in cross-cutting areas.

The KISAN Project is one of USAID/Nepal's Feed the Future Initiatives in Nepal and directly contributes to USAID/Nepal's Development Objective 2 (DO2): Inclusive and sustainable economic growth to reduce extreme poverty.

In order to achieve improved agricultural productivity (Component A), KISAN will achieve two IRs: 1) agriculture-based income increased, and 2) small enterprise opportunities expanded. To achieve these IRs, KISAN will improve farmers' access to inputs, build the capacity of change agents and organizations, introduce new technologies, and strengthen markets. KISAN will improve cereal crops (maize, rice, and lentil) and high-value vegetable production based on agro-ecological conditions and market demand. KISAN conducted a subsector analysis and has identified groups of smallholders (production pockets), matching product demand with production capabilities.

To date, KISAN has formed 4,024 farmer groups and trained approximately 82,500 farmers to raise high-value agriculture and improved lentils, rice, and maize. In this process, the program has trained 545 change agents (LSPs, government extension agents, etc.) and formed 58 Marketing and Planning Committees (MPCs). Moving forward, KISAN will further strengthen the change agents, expand the promising production pockets, and continue to strengthen the capacity of the MPCs to ensure sustained market access.

KISAN will achieve these outcomes by strengthening private and public sector actors (dealers, traders, millers, processors, companies, agrovets, wholesalers, cooperatives, etc.) working in agriculture to create sustained results. KISAN will strengthen the private sector approach by promoting business and entrepreneurial skills along the commodity chain – from teaching change agents basic business skills to providing marketing experts to input providers so they will incorporate trainings and demonstrations to sell more products. KISAN will encourage processors to integrate agriculture experts into their workforce to train farmers on improved maize and lentil cultivation. KISAN will use a combination of training, consultancies, and grants to help strengthen private sector actors.

To improve productivity, KISAN will increase access to high-quality agricultural inputs (Outcome 1), mainly focusing on water, seed, credit, and other inputs. KISAN will increase access to water for irrigation and other domestic uses through a multiple use water services (MUS) approach. The project will increase the availability, quality, and quantity of high-yielding and drought, flood, and disease-resistant seeds by strengthening and expanding seed companies and cooperatives' production and marketing. For the most remote households, KISAN will promote seed production and other less perishable commodities to sustainably increase incomes and improve production for home consumption. In collaboration with the Component C contractor, KISAN will increase farmers' understanding of how to access and utilize credit and, under Component A, will increase the availability of microcredit in target districts.

To build the capacity of change agents (Outcome 2), KISAN will employ a training-of-trainers (TOT) approach through which staff will equip extension agents, lead farmers, and local service providers (LSPs) with the training and resources required to train farmers and beneficiaries on improved agricultural practices and services. KISAN will establish new farmer groups via cooperatives and will link them to private sector actors. KISAN will work with private sector entities to embed agriculture training services within companies and cooperatives to ensure farmers' sustainable access to technical assistance to improve quality production. Training will focus on production of high-value vegetables for market sale, production of cereals and lentils for millers/processors, and nutrient-rich agricultural products that can be consumed within households to improve nutrition. Through these trainings and demonstrations via the private sector, KISAN will introduce improved sustainable agriculture practices and technologies, as well as techniques for cereal crop intensification, improved post-harvest technologies, and strategies to reduce vulnerability to climate change. The introduction of preservation and storage technologies will reduce post-harvest losses (Outcome 3).

KISAN will strengthen existing Marketing and Planning Committees (MPCs) in key vegetable production pockets so farmers can sell their produce, purchase inputs, and use productivity-enhancing technologies. To ensure that gains in productivity are sustainable and result in increased incomes, KISAN will promote market-led agriculture activities that lead to an increase of on- and off-farm jobs. MPCs are comprised of various stakeholders including smallholder farmers, output traders/wholesalers, and District Agriculture Development Office (DADO) representatives. MPCs will play a crucial role in organizing and managing collection centers, establishing linkages with external traders and wholesale markets, sharing market information, helping market-led production planning, and expanding their capacity to absorb the increased production of smallholder farmers promoted by KISAN (Outcome 4). KISAN will also build the capacity of other key market actors, establish linkages between farmers and markets, and promote entrepreneurial skills for farmers and other commodity chain actors.

KISAN will build the technical and organizational capacity of local organizations, including the private sector (Outcome 5) and government organizations, to ensure they assume ownership for and carry on implementation of activities introduced by the project to promote inclusive agriculture sector growth. KISAN will build capacity through technical and entrepreneurial trainings and grants (see Outcomes 1 – 4).

KISAN will work through local government, private sector, extension agents, and others to increase the capacity of Nepali institutions and organizations. Finally, the project relies on gender and social inclusion as a guiding principle in its design and will give special consideration in all phases of management and implementation to extending project benefits to all populations in KISAN districts by including men and women equally and reaching excluded and marginalized populations.

COMMODITY CHAIN APPROACHES FOR THE FOUR COMMODITIES

KISAN works in four major commodity chains: rice, maize, lentils, and high-value vegetables. Input supply chains (irrigation, credit, seeds, and mechanization) are integrated into the commodity chains,

with linkages to appropriate actors. KISAN has developed approaches in each of the commodity chains based on market demand, production potential, and project presence. The activities associated with KISAN's strategy for each commodity are described by outcome in section II below.

RICE

KISAN will continue to support previously trained farmers to improve their rice production and marketing. In addition, the project will work with seed companies to increase rice seed production. In coordination with CSISA, KISAN will provide TOT to LSPs and other change agents throughout the Terai and hills on improved rice production practices and technologies, rice seed, and post-harvest practices. LSPs and change agents will in turn support and train farmers. Training will be complemented by strategically located demonstration plots. KISAN will promote LSPs/change agents to develop enterprises that offer agriculture services to smallholders. For additional details on the rice commodity chain approach, see Annex C.

MAIZE

KISAN will work with feed mills in Terai districts to develop embedded services. The project will consider grants for feed companies to hire agriculture technicians to provide technical assistance to farmers to increase their productivity. KISAN will link seed companies, agrovets, farmer groups, cooperatives, and local maize traders and will help feed mills identify production pockets. KISAN, with CSISA, will continue to train farmers while the feed mills develop business plans with embedded services and will, if necessary, train the mills' technical experts once hired.

In the hills, KISAN will increase productivity through the introduction of improved technologies to improve household food security. KISAN, along with CSISA, will provide TOT to agrovets and LSPs to provide training to farmers. Change agents will support previously trained farmers on technical matters and market linkages. See Annex C for additional details on the maize commodity chain approach.

LENTILS

In Terai districts, KISAN will work with up to four lentil mills and will link interested mills with cooperatives or producer groups raising lentils. KISAN will provide TOT to lead farmers who will be expected to train other members of their cooperatives on key production practices. KISAN will also work with the mills via grants to develop business plans with embedded technical assistance (agriculture technicians/LSPs will train cooperatives directly and develop demonstrations). KISAN will consider providing the entrepreneurial members of the cooperative with in-kind grants for lentil cleaning so that they can provide a fee-based, lentil cleaning and sorting service to neighboring farmers, and will also provide them with enterprise and technical training. KISAN will also facilitate linkages between cooperatives, financial institutions, and millers via workshops. See Annex C for additional information on the lentil commodity chain approach.

HIGH-VALUE VEGETABLES

KISAN will strengthen and expand existing production areas where the project has established MPCs and farmer groups to increase production of vegetables for MPCs. KISAN will continue to provide

trainings and TOT to LSPs, agrovets, and MPCs so they can provide additional support to KISAN farmers and new farmers. Lead farmers will establish demonstrations to promote improved technologies. KISAN will consider making grants to Savings and Credit Cooperatives (SACCOs) and agriculture cooperatives to expand their membership and will encourage cooperatives to hire agriculture experts to provide technical assistance and training to farmers. MPCs will receive additional support through training, TOTs, exposure visits, and workshops to build relationships and increase linkages. Grants will be awarded to key input suppliers (irrigation technology supply chain, post-harvest storage or processing) to develop marketing plans/materials and demonstration plots. KISAN will also promote entrepreneur training and record keeping to LSPs, agrovets, MPCs, and farmers. For additional information on the high-value vegetable commodity chain, see Annex C.

All farmer groups and cooperatives in all commodity chains will be linked to savings and credit cooperatives and/or to microfinance institutions (MFIs) so that they can afford inputs. KISAN will also strengthen MFIs to reach to KISAN Village Development Committees (VDCs).

Table I. Overview of activities by outcome and commodity

<table>
<tr><th>Commodity</th><th>Outcome 1
Increase Access to Quality Inputs</th><th>Outcome 2
Build Capacity</th><th>Outcome 3
Adoption of Technologies</th><th>Outcome 4
Increase Market Efficiency</th><th>Outcome 5
Strengthen Capacity of Local Orgs.</th></tr>
<tr><td>Maize
Rice
Lentils</td><td>Improve and increase seed production, strengthen credit availability and demand, provide technical advice</td><td rowspan="2">Train 2014 and 2015 LSPs and agrovets; train private sector hired agriculture experts</td><td rowspan="2">Demonstration, extension messages, and trainings</td><td>Exposure visits, linkages between farmers, buyers and processors</td><td rowspan="3">Strengthen small enterprises and organizations via entrepreneurial trainings and technical assistance</td></tr>
<tr><td>Vegetables</td><td>Promote irrigation, strengthen credit availability and demand for bio pesticides</td><td>Strengthen MPCs, exposure visits</td></tr>
<tr><td>Grants</td><td>Companies with marketing plans (supported by KISAN and CSISA) embed trainings and demonstrations to increase input sales</td><td>Embedded agents hired by the private sector train new farmers and change agents</td><td>Companies & vendors demonstrate technologies through agrovets and trainings</td><td>ICT market information system</td></tr>
</table>

CRITICAL ASSUMPTIONS

Success of the KISAN Project is based on several underlying assumptions. General assumptions are as listed below; outcome-specific risks are outlined in respective sections.

- Other Feed the Future components are operational and successful.
- The GON supports KISAN.
- Larger infrastructure (roads, large scale irrigation) is in place.
- VDCs, other line agencies, and other projects are willing to support and provide other resources to support the beneficiaries.
- The political situation is stable.
- Other projects are interested in working in a coordinated fashion.
- Beneficiaries are interested in/to change.
- Agriculture production is not significantly impacted by weather or climate change during project years.
- Fertilizer is available.
- The private sector is interested in applying for grants, expanding their business and vertically integrating to support smallholder farmers.

II. EXPECTED ACTIVITIES TO BE UNDERTAKEN TO REACH ANNUAL OBJECTIVES

DEVELOPMENT OBJECTIVE 2: INCLUSIVE AND SUSTAINABLE ECONOMIC GROWTH TO REDUCE EXTREME POVERTY

KISAN will address food insecurity in Nepal by increasing rural people's income through the promotion of improved commercial agriculture production of the four commodities, linked to markets and functional supply chains. KISAN will strengthen and work with private sector agribusinesses to ensure that commercial agricultural production continues after the project ends.

Table II. Development Objective 2 Indicators and Targets

Ref. no.	Indicator	2015 Target
4.5.2(13)	Number of rural households benefiting directly from USG interventions	82,500*
4.5.2(14)	Number of vulnerable households benefiting directly from USG assistance	25,650

**KISAN has directly trained 82,500 farmers. In 2015, KISAN will continue to support these farmers both directly and through trainings delivered by Change Agents (e.g. LSPs, Agrovets, Lead Farmers)*

IR 2.1: AGRICULTURE-BASED INCOME INCREASED

KISAN will improve agricultural productivity by increasing farmers' access to improved agricultural inputs, namely improved seed, water, and credit; improving the capacity of agricultural extension workers, service providers, and farmers (in entrepreneurial and agricultural practices); and improving sustainable agriculture production and post-harvest technologies (soil, nursery, IPM, irrigation, fertilizer, harvesting and postharvest practices, including the use of machinery) at the farm level.

Table III. Intermediate Result 2.1 Indicators and Targets

Ref. no.	Indicator	2015 Target
4.5(16)	Gross margin per hectare of selected product	Maize: 524 Lentil: 492 Rice: 424 Vegetables: 3,441
4.5.2.8	Total quantity of targeted nutrient-rich value chain commodities set aside for home consumption by direct beneficiary producer households	no target set

Outcome 1: Improved access to increased quality inputs for farmers

Farmers generally lack access to timely and quality inputs, which greatly reduces the productivity of their rice, maize, lentil, and vegetable crops. The KISAN Project will focus on key inputs – seeds, water, credit, and other inputs required to raise FTF commodities. While fertilizer is another common limitation, the International Food Policy Research Institute (IFRPI) is working on policy issues regarding fertilizer availability. KISAN will strengthen the capacity of agrovets to improve marketing of key inputs through a pilot embedded services approach to training and demonstrations

Table IV. Outcome 1 Indicators and Targets

Ref. no.	Indicator	2015 Target
4.5.2(29)	Value of agricultural and rural loans	4,288,568
4.5.2(30)	Number of MSMEs, including farmers, receiving USG assistance to access loans	16,570

Critical Assumptions:

- Government does not buy all the companies' seeds and they have seed to sell to the market.
- Availability of source seeds is sufficient for seed production.
- Farmers have access to fertilizer.
- Enterprises are interested in growing their business and increasing their clients and revenue.
- Water is nearby (KISAN is not involved in large-scale irrigation projects or construction).
- Farmers will pay for inputs.

Seeds

KISAN will focus its work in six Terai districts and six hill districts to produce commercial seed with seven companies and seed cooperatives (see Table V).

Table V. Seed companies and cooperatives by district and commodity

District	Seed	Company
Kailali	Rice/Lentil/Maize	Unique Seeds and Pancha Shakti Seed Company
Kanchanpur	Rice/Lentil	
Bardiya	Rice/Lentil	Budhan Multipurpose Cooperative, Harikrishina Cooperatives, Gate Nepal
Kabilvastu	Rice	International Agro Seed company
Pyuthan	Maize	Nepal Agroseed and Input Company and Beej Bridhi Company Pvt. Ltd, local cooperative
Dang	Rice/Lentil/Maize	
Surhket	Maize	Local cooperative
Salayan	Maize	
Dhadledhura	Maize	
Banke	Rice/Lentil,	Gate Nepal, Nepalgunj Agro, KUMCL, Cooperatives of Hermania

The project will collaborate closely with CSISA to develop the seed sector and increase access of quality seeds to farmers. CSISA is working with seed companies to strengthen business plans for growth in size, scope, and reach. In coordination with CSISA, KISAN will train and link seed producers to seed companies (and cooperatives for maize seed production in the hills) and help companies develop marketing plans to expand their sale of improved seeds in the KISAN districts through agrovets.

To address the chronic shortage of qualified seed crop inspectors, KISAN will support GON and seed company staff on seed crop inspection through trainings.

Activity A.1.1 Increase the quantity and improve the quality of seed inputs for rice, maize, and lentils.

Activity A.1.1.1 Increase certified seed production. The Outcome 1 Manager will continue to work with key seed companies and KISAN district staff to make linkages between seed producing cooperatives in KISAN VDCs and seed companies (where possible, through contractual agreements or MOUs between companies and farmers). Through the linkages, companies will provide foundation seed to farmers to produce quality certified seed that the companies will buy. Where possible, companies will provide farmers with the technical training and advice to raise quality certified seed, as a best practice. In cases where this is not already occurring, CSISA, in their business planning efforts, will encourage companies to eventually include embedded technical services to seed producers. In cases where seed companies are not yet providing technical expertise to the expanded number of seed producers, KISAN will provide the following training package:

a. Three one-day trainings on seed production will be provided to seed growers at the community level. Such training will be provided at the time of sowing, flowering, and harvesting.

b. Three days of residential training at the cluster level will be provided to lead farmers of seed production groups for each crop (maize, rice, and lentils). The training will focus on isolation distance, sowing practices, seed treatment, agronomic practices, identification of off types and removal, maintenance of seed plots, plant protection measures, maturity status and harvesting methods, seed cleaning, grading, seed treating, bagging and storage aspects, seed sampling and sending to seed testing laboratory for analysis. (25-30 persons, one from each group, in each cluster, two per cluster/seed crop)

c. Because all seed must be certified by a third party, KISAN will also provide a seven-day training once per year to the District Agriculture and Development Office staff (2-3) from the DADO or Agriculture Service Center on how to become crop inspectors, which is required for all commercial seed. Regular crop inspection will be done by project staff and the Seed Quality Control Center (SQCC). Rouging will be carried out as and when required. (seven-day residential with at least 20 participants once a year)

Benchmark(s): Seed producers trained, linked to, and producing for commercial seed company farmers producing 250 metric tons
Resources: KISAN seed staff; CSISA seed staff
Dates: Lentil Seed Production, (December 2014) – April 2015; Maize Seed, May – October 2015; Rice, June – November 2015

Activity A.1.1.2 Seed companies with improved marketing and distribution to KISAN VDCs. KISAN will complement CSISA's work with seed companies in developing business plans to expand their sales by improving their general and specific marketing in order to increase the availability of certified seeds to agrovets/input suppliers and farmers in the KISAN VDCs. For interested companies, KISAN will provide training on applying for grants to:

- Strengthen links with KISAN agrovets and embed demonstrations and training on planting improved varieties.
- Improve marketing and quality control of company's seeds though branding, seed buy-backs from agrovets, and training to agrovets to be "certified" carriers of their product. Seed companies could advertise their seed with "how to" informational posters or videos that will inform farmers and agrovets on how to properly raise the seed, or they may develop "certified" distributor program for agrovets.

KISAN's success in this area will be dependent on government policy. During the past season, despite KISAN's effort to help seed companies produce more volume, the government purchased rice seed directly from the companies as part of their program to distribute rice seed, and the companies had no seed to distribute to the retailers.

Benchmark(s): 300 tons of seed sold through KISAN agrovets, seed companies, and cooperatives. They will be providing farmers with trainings and demonstrations
Resources: Marketing expert, KISAN seed staff

Dates: Marketing plans developed by July; grants issued by August

Activity A.1.1.3 Work with CSISA to plan and host Seed Summit. The Ministry of Agriculture, in collaboration with USAID and other donors, is hosting a Seed Summit scheduled for June 2015. The objective is to explore ways to increase the linkages between developed germplasm and the private sector. KISAN will participate in the planning and will cover the costs of some strategic meetings, the International Facilitator, and the assistant to the Secretariat.

Benchmark(s): International Facilitator and Assistant to the Secretariat hired
Resources: Consultant's time, international travel, staff time, national meeting costs; USAID approval required
Dates: International Consultant, May – July; Assistant to Secretariat, January – July

Water

Activity A.1.2 Strengthen input supply chains of irrigation, water storage products. On the irrigation supply side, a local consultant will be engaged to meet with distributors and manufacturers of products that are used for water storage and irrigation (plastic barrels, drip emitters and pump sets, gutters for rainwater collection, shallow tube wells) and sold commercially. The consultant will engage the distributors and manufacturers in discussions on how to increase their sales by improving their marketing by setting up demonstrations (which also serve as advertising), posters/promotional materials (with "how to" tips), and providing trainings directly to farmers on how to use the products. KISAN may make grants to manufacturers and distributors to pilot marketing of irrigation equipment through an embedded services approach in both the Terai and the hills.

Benchmark(s): Consultant's recommendations; marketing plans developed
Resources: Marketing expert; possibly grant resources
Dates: Marketing Consultant, May 2015; grants issued by June 2015, and activities conducted July – August 2015

Activity A.1.2.1 Support farmers in establishing irrigation schemes. Where the private sector is not reaching, KISAN district-based Irrigation Technicians and other staff will work with farmers groups to increase access to finance and demonstrate how to set up and use irrigation systems (such as drip irrigation). KISAN will work with communities (focusing on those in vegetable production pockets) to set up various types of irrigation schemes, including gravity-fed systems (hills) and shallow tube wells (Terai), through a cost share approach that mobilizes project resources as either matching funds or to directly support demonstration activities. KISAN will support a robust toolkit for irrigation; special attention will be given to demonstrating larger schemes that serve the community (i.e. Multiple Use Systems) and general water conservation in areas that practice flood irrigation for high-value crops. KISAN Irrigation Technicians (ITs) will work with the Program Officers (POs) to identify places to demonstrate irrigation for high-value agriculture, such as Female Community Health Volunteer (FCHV) homes, health posts, Component C literacy classes, and LSP farms, which have high traffic by our project beneficiaries.

Benchmark(s): 275 irrigation schemes established;
Resources: IT time; costs for supplies for demonstration; training costs
Dates: Ongoing

Credit

To purchase new seeds and inputs, many farmers and change agents need loans, but most lack the necessary collateral to access credit. KISAN is focusing on five major activities to help increase agricultural loans to farmers and change agents. First, the project is strengthening microfinance institutions' presence in KISAN VDCs and strengthening their ability to work with KISAN farmers. Second, the project helps MFIs access additional wholesale credit where needed from other financial institutions. Third, KISAN strengthens and links farmers (through groups) to existing Savings and Credit Cooperatives (SACCOS). Fourth, KISAN is helping train farmers and farmers' groups on how to access credit. Finally, KISAN will help larger agribusinesses to access loans as needed. This work is complemented by DEPROSC's Business Literacy training for KISAN beneficiaries in how to access credit.

Activity A.1.3 Increased credit availability in KISAN districts and along KISAN commodity chains. One limiting factor that farmers face is access to credit. Many smallholder farmers lack fixed asset collateral (land). During Y3, DEPROSC will continue to build the capacity of MFIs to provide loans to KISAN beneficiaries. In the past six months, KISAN has completed all MFI trainings for Y3. The remaining MFI activities will further strengthen them as they begin working in KISAN VDCS.

Activity A.1.3.1 Coordinate MFIs with other finance activities in the KISAN districts. KISAN will help organize financial sector efforts by bringing together various financial institutions (microfinance banks, FINGOs, and contributing savings and credit cooperatives) working in the KISAN areas to assess the opportunities and players. Through workshops, KISAN will look at trends of formal and informal forms of financing, opportunities for the financial institutions, MFIs' outreach plans, and areas of cooperation among KISAN and MFIs. Three workshops have already been completed.

Benchmark(s): MFI outreach plans for KISAN VDCs completed
Resources: Staff time; workshop costs
Dates: March 2015

Activity A.1.3.2 Link banks and wholesale financiers with potential agribusiness vendors and local MFIs. The Credit Team will support MFIs by linking them to larger wholesale banks and wholesale financiers so they can increase their working capital as they increase the number of clients. KISAN will conduct a three-hour credit workshop in Kathmandu and invite lending banks as well as other banks engaged in development financing.

At cluster levels, KISAN will create a forum for interface among local vendors, agribusinesses, and local MFIs in a half-day workshop to facilitate financing channels. Four workshops have been completed. A

central-level workshop will be carried out to bring together larger FIs, potential cooperatives, and agribusinesses.

> **Benchmark(s):** One workshop conducted; linkages established between FIs and agri-businesses
> **Resources:** DEPROSC KISAN manager's time; meeting costs
> **Dates:** April 2015

Activity A.1.3.3 Strengthen cooperatives and link with KISAN farmers. KISAN will strengthen SACCOs and link them to KISAN beneficiaries as needed. Microfinance expert/s have already provided a six-day TOT. KISAN staff will work with SACCOs to:

- Develop business plans that will include innovative financial products and delivery models.
- Analyze portfolios, including outstanding loans and their purposes, overdue amounts, service charges, and interest rates.
- Help appropriate SACCOs in building linkages with existing district federations, if any, and possibly the Nepalese Federation of Savings and Credit Unions (NEFSCUN). Provide support in recordkeeping systems, bookkeeping standards, use of computer facilities, etc.

KISAN will organize exposure visits for selected SACCOs, and the CSCs will monitor the SACCOs' outreach activities in the KISAN project area.

> **Benchmark(s):** SACCOs will be assessed, and 80 representatives will be strengthened; exposure visits conducted for 50 SACCOs members
> **Resources:** Staff time; training costs; exposure visit costs
> **Dates:** Linking SACCOs to KISAN farmers will continue throughout Y3

Activity A.1.3.4 Train farmers and farmer groups on how to access credit. The district-based Credit staff is working with the farmers' groups to increase their knowledge of credit and how to access it. KISAN has been and will continue to prioritize women and marginalized groups and others that lack collateral. In cases where farmers' groups are not part of savings and credit groups, KISAN provides orientation on how to form a savings and credit group. In cases where the savings and credit groups exist, KISAN staff is linking them to MFIs so they can access external credit. In cases where the groups have expressed an interest in becoming cooperatives, the staff provides them with consultations on how to become a cooperative.

> **Benchmark(s):** Farmers groups trained; farmers borrowing $3.2M
> **Resources:** Staff time
> **Dates:** Ongoing

Activity A.1.3.5 Facilitate loans with commercial enterprises. As KISAN works with larger agribusinesses along the commodity chains, the project will link companies to financial institutions tied to the upcoming DCA. KISAN will also work with companies to incorporate accessing credit in business plan preparation (see Activities A.2.2 and GUC.3).

Benchmark(s): Loans provided to agribusinesses
Resources: Staff time, meeting costs
Dates: August 2015, depending on roll out of DCA

Outcome 2: Improved capacity of agriculture extension workers, service providers, and farmers

Under Outcome 2, KISAN, through its technical staff, has directly trained 545 change agents (LSPs, agrovets, GON, lead farmers) and has directly trained 82,500 farmers to increase agriculture productivity. Moving forward, KISAN will focus efforts to further strengthen the existing change agents through a series of TOTs. Change agents will be expected, in turn, to train and provide direct services to farmers. We have found that if farmers do not understand the value of paying for quality inputs, they are not likely to pay LSPS for services. KISAN will pilot additional ways to ensure sustainability of extension services by embedding training and technical assistance in a variety of private sector actors. For example, KISAN will not directly form new farmer groups or cooperatives; instead, KISAN will pilot grants to SACCOs and agriculture cooperatives to establish and train new vegetable farmers' groups.

Table VI. Outcome 2 Indicators and Targets

Ref. no.	Indicator	2015 Target
4.5.2(7)	Number of individuals who have received USG-supported short-term agricultural sector productivity or food security training	70,760*

**This includes farmers directly trained by KISAN, directly trained by LSPs, and directly trained by the private sector.*

Critical Assumptions:

- Farmers will pay for services.
- There are adequate numbers of individuals that can serve as change agents.
- Change agents are interested in participating in trainings.

Activity A.2.1 Continue to strengthen change agents. KISAN District and VDC Coordinators will work with district-based Program Officers and Technicians to provide additional training to change agents on vegetable, maize, rice, and lentil production (where relevant). First they will conduct an assessment of the LSPs to identify needed areas of training. Over the next seven months, LSPs will be provided, on average, four structured, one-day, TOT training courses (based on needs) to build LSP capacity to provide quality agriculture advice, to become entrepreneurs (by selling seedlings, inputs, etc), to conduct training for farmers on commercial vegetable cultivation and improved rice, lentil, and maize production. Entrepreneurial training will teach them how to earn income for their services (providing advice, offering a service, or selling products) so that they will be motivated to continue playing this much-needed role after the project ends. Change agents will be linked to district resources such as DADO, MFIs, agrovets, collection centers, and markets.

Benchmark(s): 290 Change Agents trained
Resources: Training costs; staff time
Dates: March - September 2015

Activity A.2.2 Embed sustainable agriculture training services within companies and cooperatives. Through a combination of direct meetings, training, and grants, KISAN staff will work with processors and millers (in the case of lentils and maize in the Terai), SACCOs, and agriculture cooperatives, wholesale markets (for high-value agriculture in the hills and Terai respectively), and private sector input suppliers to adjust their business model to integrate agriculture training. Grants will be used to incentivize these private sector actors to reach the KISAN VDCs. Cooperatives have the ability to increase their income by expanding the membership and client base by forming farmer groups in KISAN VDCs. KISAN will conduct individual meetings to offer business planning services that will include embedded services and access to credit to finance such investments. KISAN will offer grants to interested and trained cooperatives to hire key agriculture staff to organize farmer groups and conduct trainings. KISAN will consult with the cooperatives on forming farmers' groups within a "pocket area" – a group of farmers from within a designated geographic area that feed into a common collection center. Farmer groups may also be the Component C class participants. KISAN will promote the trainings, demonstrations, and topics as per Table VII.

Table VII. Key training topics by commodity

Lentils	Rice	Maize	Vegetables
Weed management	Production practices	Spacing	Nursery management Seedling cultivation
Production management (including seed treatment, land preparation, seed sowing)	Integrated Pest Management	Agronomic management	Transplanting
Post-harvest management – cleaning, sorting	Post-harvest management including grading, cleaning, sorting, storage	Grading, cleaning, sorting, and packaging	Harvesting, post-harvest handling, packaging, and labeling
Harvesting	Harvesting	Harvesting	Integrated Pest Management
Basic business planning			Production technologies
			Marketing – packaging, handling, grading, storing, and transport

Benchmark(s Work with a total of 5,000 farmers in maize, rice, lentil, and vegetable value chains through partnerships with feed mills, processors, and cooperatives.
Resources: Agriculture Program Officer, Agriculture Technician staff time; LSP time, travel, including domestic airfare; training costs; grants; leadership by CEAPRED and Winrock
Dates: Throughout Y3

Outcome 3: Improved and sustainable agriculture production and post-harvest technologies and practices adopted at the farm level

Outcome 3 will focus on promoting improved technologies through the trainings (described in Outcome 2) TOTs to LSPs, and through private sector actors, that will increase production while improving natural resource management and post-harvest management. Under this outcome, KISAN will bring to scale research findings from CSISA, including new seed varieties, technologies, and practices, USAID-funded Innovation Labs, and NARC when applicable. Technologies and practices may include those that capture water, conservation tillage practices, and improved post-harvest management of cereals and vegetables. KISAN will share these improved technologies with farmers through training of Change Agents (Outcome 2), demonstrations, and communications campaigns. During Y3, KISAN will promote improved technologies through the grants project.

Table VIII. Outcome 3 Indicators and Targets

Ref. no.	Indicator	2015 Target
4.5.2(2)	Number of hectares of land under improved technologies or management practices as a result of USG assistance	23,112
4.5.2(5)	Number of farmers and others who have applied improved technologies or management practices as a result of USG assistance	82,255

Critical Assumptions:

- Farmers are willing to adopt the new technologies introduced.
- Farmers are willing to take risks by diverging from current practices.
- Technology is available in the market.

Activity A.3.1 Identify improved technologies to introduce to farmers. KISAN has and will continue to work closely with CSISA, Integrated Pest Management–Innovation Laboratory (IPM-IL), and the GON (particularly NARC) AgLearn portal to identify proven, low-cost, readily available, high-impact, improved technologies. See Annex B for a list of technologies KISAN is promoting by commodity. CSISA will provide direct TOT and provide training materials on improved rice, maize, and lentil technologies to KISAN staff, LSPs, and other change agents to:

- Increase sustainable production of high-value crops (off-season vegetables);

- Improve yields of traditional crops; and
- Reduce post-harvest loss.

KISAN will continue to meet regularly with CSISA, IPM-IL, Horticulture-IL, and other research projects to identify well-tested, proven technologies to promote in the project area.

> **Benchmark(s):** New technologies and training materials promoted by KISAN; LSPs and KISAN staff trained
> **Resources:** Regional Coordinator, Capacity Building Specialists; District staff
> **Dates:** Rice and Maize, April – September; Lentil and Maize, December – April; Vegetables, ongoing

Activity A.3.2 Establish demonstration plots. Through the private sector approach, KISAN plans to provide grants to companies to market their inputs (improved seed, irrigation products, agriculture machinery, etc.) through demonstrations and trainings. Grants to millers, processors, and cooperatives to embed services within their companies will also establish demonstrations. Demonstration plots will show how improved technologies work and the difference in yield between local practices and improved technologies and practices. Where possible, the demonstration sites will be set up along heavily traveled paths or roads to maximize exposure. In addition, change agents and District staff will occasionally bring farmers on field visits and conduct training with the farmers at the sites. The demonstrations will include dissemination of improved techniques of IPM-IL and CSISA in change agent fields; plastic house with drip irrigation; plastic mulch with drip irrigation; rice, maize, lentil, and vegetable crop/seed production; and storage technology for cereals and legumes. The KISAN Project will work with IPM-IL and CSISA to co-locate demonstrations plots to maximize learning opportunities during farmer field visits.

To demonstrate machinery, the KISAN Project will provide grants to machinery vendors so that they will increase their inventory of mini tillers, tractors, and assorted attachments and then host farmer field days (in coordination with KISAN farmer schedules and KISAN staff) to demonstrate conservation agriculture and labor saving devices.

> **Benchmark(s):** 1,500 demonstration sites in the 20 districts
> **Resources:** Staff time; costs for supplies for demonstration
> **Dates**: July 2014 – ongoing

Activity A.3.3 Organize exposure visits. KISAN will organize three-day exposure visits for change agents to CSISA, HMRP, IPM-IL, CEAPRED, and GON farms and research stations. KISAN farmers will also participate in one-day intra-district exposure visits to change agent demonstration fields replicating CSISA, HMRP, IPM-IL, CEAPRED, and GON farms and research station technologies. Further KISAN will explore the potential for exposure visits for lead farmers, local companies, machinery dealers, commercial agribusiness, KISAN and GON staff.

> **Benchmark(s):** Change agent exposure visit plan developed; 100 change agents' participation in exposure visits

Resources: CEAPRED's Regional and district staff time; exposure visit costs
Dates: Throughout Y3

Activity A.3.4 Develop and disseminate extension messages. KISAN will explore ways to disseminate extension messages on improved agriculture technologies and cultivation, post-harvest, and marketing practices on a national level. KISAN will work with the private sector to sponsor messages about technologies that should be adopted such as inoculating lentil seed, timing of seed variety planting or other key messages. KISAN will work with CSISA on the key messages for cereal and pulse crops. KISAN will coordinate with DOA to access time in the Regional Agricultural Program run by RAD in Radio Nepal. KISAN will work with a local communications firm to develop the messages. Also, in line with continuing integration between USAID's FTF and Global Health Initiative (GHI) projects, KISAN will coordinate with the Suaahara project to integrate key information on agriculture-related possible impacts on maternal and child health in Suaahara's radio program, "Bhanchhin Aama."

Benchmark(s): Pilot messages launched by end of the year
Resources: Component A Manager (Agriculture Expert) and district staff time, and message dissemination cost.
Dates: July 2014 onwards

Activity A.3.5 Promote agriculture mechanization. As an initial step, KISAN released a request for application during Y2 for dealers to apply for up to $10,000 per district to procure machinery they do not already stock (attachments) and to demonstrate mechanized agriculture practices (using two- and four-wheel tractors) in farmers' fields. As in the seed sector, we will work with CSISA to identify interested dealers to develop marketing plans with informational pamphlets, posters, and perhaps video that they can use in conjunction with demonstrations to farmers and cooperatives to increase their sales. We will link interested vendors to financial institutions so that they can either provide their own credit to farmers or link farmers with third party credit.

KISAN will also link dealers with CSISA and other projects where mechanized agriculture can be one aspect of the demonstration plots they conduct (especially with respect to conservation agriculture).

Benchmark(s): Assessment conducted, dealer business plans developed, and grants made to dealers
Resources: Business consultant (or firm)
Dates: Ongoing

IR 2.2: SMALL ENTERPRISE OPPORTUNITIES EXPANDED

Outcome 4: Improved market efficiency

KISAN will coordinate with the Business Literacy Component staff from DEPROSC to teach farmers and rural residents how to increase their revenue and profit by investing in productive assets that improve product quality. In addition, because entrepreneurial skills are so important to raise gross margins, KISAN will incorporate basic entrepreneurial skills (including record keeping) for farmers and agrovets into training. Outcome 4 will focus on building the capacity of key market actors and

establishing linkages between farmers and markets, which will create demand for both inputs and farm outputs. For vegetables, KISAN will strengthen existing MPCs and wholesale markets so that they will continue to support smallholder farmers. KISAN will not plan to develop any new MPCs given the limited time remaining in the project.

For seeds, lentils, rice, and maize, KISAN will link millers and processers to groups for rice and maize to ensure that farmers have a buyer for their products.

Table IX. Outcome 4 Indicators and Targets

Ref. no.	Indicator	2015 Target
4.5.2(23)	Value of incremental sales (collected at farm-level) attributed to FTF implementation	TBD
4.5.2(38)	Value of new private sector investment in the agriculture sector or food chain leveraged by FTF implementation	USD 306,000
4.5.2(37)	Number of MSMEs, including farmers, receiving business development services from USG assisted sources	660

Critical Assumptions:

- Farmers have adequate access to reliable price information.
- MPCs function effectively.
- Farmers can raise products competitively (in relationship to India).
- The benefits of commercial production exceed the risk of changing from previous practices.
- Farmers are able to buy more food with the money they earn from raising commercial crops than when they raised their own food.
- Farmers/buyers honor contract agreements or other pre-harvest agreements.
- Market for commodities produced continues to grow.

Activity A.4.1 Strengthen MPCs. For the remainder of the project, KISAN will concentrate efforts on strengthening existing and viable MPCs by developing customized training plans and overcoming weaknesses. KISAN will work with PAHAL staff to coordinate efforts, as both projects are working with marketing outlets. BDSOs and Marketing Managers will strengthen MPCs by providing them with TOT so they can share the information with their farmer and others. KISAN will help MPCs to:

a. Promote market-led production planning and marketing schedules.
b. Collaborate with VDCs and DADOs to leverage funds.
c. Register with their respective DADO (district level).
d. Develop into cooperatives and/or work collectively.

e. Promote post-harvest handling (packaging, transportation, storage, minimizing loss, sorting, grading, labeling, etc.) so they can share the information with their farmers.

f. Share price information and other extension messages by radio and other media (district level).

In addition, KISAN will conduct meetings to coordinate the regional production and selling of high-value produce. By unifying the MPCs of the region, KISAN will improve communication, planning, and possible lobbying to address different market-related issues and will coordinate marketing of produce from MPCs to ensure fair prices.

> **Benchmark(s):** At least 29 MPCs trained; 84 MPC representatives trained; facilitated formation of four regional MPC meetings
> **Resources:** Outcome 2 Manager, Outcome 4 Manager, Regional Marketing Officer's time, STTA for curricula development, BDSO and Marketing Supervisor (MS) time; training costs
> **Dates:** Training from August 2014 through September 2015. MPC activities throughout Y3

Activity A.4.2 Conduct exposure visits. To strengthen MPCs, KISAN will organize exposure visits for MPCs, LSPs, project staff, GON staff, etc. to visit well-developed and functional MPCs, wholesale markets, and production pockets such as the Kapurkot, Bulbule, and Madan Pokhara production pockets and Butwal market outlets so they will be exposed to successful markets and replicate examples they see. The visits will also forge relationships between individuals from different districts.

> **Benchmark(s):** Exposure visits and field visits conducted for 128 LSPs, farmers, representatives from MPCs and GON
> **Resources:** Assistant Marketing Director, MS; travel costs
> **Dates:** July 2014 to September 2015

Activity A.4.3 Strengthen wholesale markets. KISAN will work with wholesalers to strengthen key wholesale markets (Kohalpur in Banke; Attariya in Kailali; Mahendranagar in Kanchanpur; and Birendranagar in Surkhet) and provide training in how to manage the committees, covering topics such as operations, finance, recordkeeping, linkages to MPCs, cost-benefit analysis, etc., and support business and strategic planning processes. Technical support will also be provided in areas such as post-harvest handing and grading. KISAN will work in additional wholesale markets as opportunities arise. For instance, KISAN has and will continue to link with Butwal wholesale market, which serves many farmers in KISAN districts.

> **Benchmark(s):** Four large wholesale market business plans developed with wholesalers
> **Resources:** Consultant or consulting firm, travel expenses, USAID approval
> **Dates:** Consultancy, April – May 2015

Activity A.4.4 Strengthen market linkages. The district team will convene buyer-supplier meetings of agrovets, lead farmers, LSPs, seed traders, wholesale markets, irrigation dealers, cooperatives, MFIs, and local government representatives (DADO officials) to build relations among these actors and ensure they continue to work together and understand market needs.

Benchmark(s): Meetings at 19 MPCs
Resources: Winrock staff time of MS/DCs/BDSOs; meeting costs
Dates: Throughout Y3

Activity A.4.5 Provide grant to establish ICT market information system needs. To provide rural farmers with timely and relevant agriculture information related to weather, market prices, and technologies, KISAN will provide a grant to an organization to pilot the establishment of a knowledge bank to compile agriculture and weather-related information from contributing stakeholders including NARC, DADO, collection centers, input suppliers, etc. This grant will include an information dissemination platform, primarily via SMS and mobile application, to make the information readily available to farmers.

Benchmark(s): Essential agriculture extension messages developed; target beneficiary SMS-group identified. Possible PPPs identified; meetings with telecoms and other multi-stakeholders held
Resources: Component A (CEAPRED) staff and PPP Manager (Winrock)
Dates: April 2015 – September 2016 (grant period of performance)

Activity A.4.6 Engage processors in training farmers. For lentils, maize, and rice, KISAN will provide grants to processors and millers to engage them in training farmers and thereby strengthen linkages. See Activity A.2.2 for additional detail.

Outcome 5: Increased capacity of GON and local organizations

Interventions under this outcome will build the organizational, entrepreneurial, and technical capacity of local organizations, including private sector actors.

Table X. Outcome 5 Indicators and Targets

Ref. no.	Indicator	2015 Target
4.5.2(11)	Number of food security private enterprises (for profit), producers organizations, water users associations, women's groups, trade and business associations, and community-based organizations (CBOs) receiving USG assistance	480
4.5.2(27)	Number of members of producer organizations and community-based organizations receiving USG assistance	82,420
4.5.2(42)	Number of food security private enterprises (for profit), producers organizations, water users associations, women's groups, trade and business associations, and CBOs that applied improved technologies or management practices as a result of USG assistance.	400

Critical Assumptions:

- Organizations are interested in the program.
- Organizations are interested and have sufficient capital for investment.

Activity A.5.1 Strengthen entrepreneurial and organizational skills of small enterprises and community-based organizations. KISAN will build the capacity of private sector and community-based organizations and enterprises. Component A staff will strengthen markets and input supply chains, and provide technical training (Outcomes 1, 3, and 4) and entrepreneurial training (Outcome 5). KISAN will also provide organizational capacity building training in improved technology or management practices to water user groups, farmer groups, cooperatives and savings groups, MPCs (as mentioned in Outcome 4), associations, etc.

Benchmark(s): Entrepreneurs/organizations trained
Resources: Winrock BDSO staff time
Dates: Ongoing throughout Y3

III. GRANTS UNDER CONTRACT

The grants program will be led by the technical commodity chain activities to provide embedded services to farmers through trainings and demonstrations. Grants will be given primarily to private sector entities and cooperatives. Most of the grants will be cash based, but they may also include Technical Assistance (TA) and/or in-kind grants. This section describes primarily the administrative activities that will be conducted to support the grants. During the remaining part of Y3, KISAN expects to award approximately $600,000 in grants. Grants are expected to be provided to the following entities for each of the commodity chains.

Table XI. Potential grants by commodity chain for Y3

Commodity	Possible Grantee	Activity	Additional Support	Possible amount
General	Ag cooperative Seed company Ag machinery dealer Super bag distributor ICT market information	Warehouse receipts Marketing planning with embedded training Inventory of new products, training, and demonstrations Training and demonstrations with agrovets	Business and/ or marketing planning	$150,000
Lentil	Ag cooperative processor	Lentil cleaner Embedded technical services	Business planning	$100,000
Maize	Ag cooperative	Sheller	Business	$200,000

Table XI. Potential grants by commodity chain for Y3

Commodity	Possible Grantee	Activity	Additional Support	Possible amount
	feed mill	Embedded technical services	planning	
Vegetables	Agriculture cooperatives and SACCOs Irrigation manufacturers	Embedded technical services	Business planning Marketing	$150,000

Activity GUC.1 Revise GUC Manual. The KISAN Project is reviewing and modifying the Grants under Contract (GUC) Manual to streamline the process. The revised manual will be submitted to USAID for approval by March 10th.

Benchmark(s): GUC Manual approved
Resources: Grants Officer staff time
Dates: March 10, 2015

Activity GUC.2 Request solicitations for grants. KISAN will release an annual program statement (APS) so that potential grantees can submit concept papers as the first step in applying for a grant. The APS will be the primary mechanism through which KISAN solicits grant applications on a rolling basis; the APS covers a wide range of topics and leaves open the opportunity for applicants to propose innovative and creative activities/solutions that address KISAN's needs as described in the APS. KISAN will then request full proposals for concepts that meet our criteria. The APS will be valid from April 2015 through April 2016.

Benchmark(s): APS released
Resources: Grants Officer time
Dates: April 13, 2015

Activity GUC.3 Provide pre-application orientations/workshops to potential grantees. KISAN will identify targeted private sector actors and build their capacity through developing business plans to include embedded services as a way to increase revenue and profit and access to credit to finance future investments in these services. At that time, the GUC staff will provide guidance on how to apply for and manage a grant.

Benchmark(s): 30 private sector actors trained on applying for grants
Resources: Winrock BDSO staff time
Dates: Training will take place from March to September 2015

Activity GUC.4 Review concepts; request proposals. Valid concept papers will be reviewed and evaluated by KISAN and other reviews. Organizations that submit concept papers that meet minimum

criteria, align with our objectives, and offer the best value will be asked to submit full proposals. Full proposals will be sent for approval as per the GUC Manual.

Benchmark(s): 10 proposals requested
Resources: Grants team time
Dates: Ongoing

Activity GUC.5 Award grants and provide post award training. Upon approvals, KISAN will provide post award training to ensure that grantees comply with the required policies regarding financial management, monitoring, and activity implementation.

Benchmark(s): 10 proposals awarded
Resources: Grants team time
Dates: $600,000 awarded by September 30, 2015

Activity GUC.6 Monitor and evaluate grants. KISAN will require each grantee to report on and monitor its activities and impact. In addition, the Grants team will also monitor the grantees to ensure the program is on track and moving forward. KISAN will occasionally monitor financial and programmatic ways as per the grants manual.

Benchmark(s): Grants monitored
Resources: Winrock GUC staff time
Dates: Ongoing

IV. COORDINATION AND COLLABORATION

PUBLIC SECTOR

Activity CC.1 Conduct National Project Advisory Committee (NPAC). Winrock established a National Project Advisory Committee (NPAC) under the chairmanship of the Joint Secretary, Foreign Aid Coordination and Policy, MOAD (Ministry of Agriculture Development). The committee includes representatives from key government agencies including Ministry of Health and Population, Ministry of Agriculture Development, Ministry of Federal Affairs and Local Government, Ministry of Finance, Agriculture Food Security Program (AFSP), NARC, National Planning Commission, FNCCI, private sector, and USAID. Engaging the national-level GON officials, KISAN is able to work with regional, district, and VDC-level government officials. The NPAC meets tri-annually. In addition, it will provide overall guidance to the KISAN Project and leverage government and private sector resources for project activities. The role of the NPAC includes:

- Establishing district-level collaboration with government agencies, including establishment of a district-level alliance of implementing partners.
- Obtaining official recognition of KISAN for facilitating project operation.

- Facilitating GON partnerships across the project components to improve training programs so that they lead to positive outcomes and increased incomes.
- Liaising with KISAN to leverage partner resources for achieving the project objectives and for enabling improved agricultural productivity and sustainability

The NPAC may expand to include other projects and other donor participants (such as PAHAL project).

> **Benchmark(s):** Three meetings per year; committee meeting notes and decisions will be compiled and acted upon
> **Resources:** Time of the COP, Component Experts, Outcome Managers, and other staff as needed to develop agenda and material for committee review and to follow up on NPAC decisions
> **Dates:** April and August 2015

Activity CC.2 Participate in District Agriculture Development Committee (DADC) meetings. KISAN will coordinate with District Agriculture Development Offices (DADO) to facilitate KISAN participation in DADC meetings and events.

> **Benchmark(s):** Participation in DADC meetings
> **Resources:** Time of the Component Experts, Outcome Managers, regional and district-based staff; all partners will be involved
> **Dates:** May vary per district meeting schedules

FEED THE FUTURE AND OTHER PROJECTS

Activity CC.3 Coordinate and link with GON and other Feed the Future Projects. In addition to NPAC, KISAN will work closely with the GON-implemented, World Bank-supervised Agriculture Food Security Program (AFSP). For example, we will share the KISAN training materials and connect private sector grantees with AFSP VDCs as well. Staff will work with managers at the national level, and KISAN district staff will work with those implementing AFSP at the district level.

KISAN will participate in FTF meetings sponsored by USAID, including GESI meetings, and coordination meetings with other USAID projects implemented in the Mid- and Far-Western Regions. KISAN will also conduct periodic partner meetings to ensure synergy and close coordination with Suaahara, PAHAL, and DEPROSC on other components of KISAN. The KISAN staff meets regularly with CSISA, IPM-IL, and Horticulture IL staff to roll out improved technologies.

> **Benchmark(s):** Coordination meetings and activities
> **Resources:** Time of COP and Regional Manager; two weeks of Accountant's time
> **Dates:** Ongoing

Activity CC.4 Integrate Peace Corps Volunteers. Winrock will meet with Peace Corps to support PC training for incoming volunteers in the spring. Winrock will provide input as needed in the

training (by providing a presentation on KISAN at a minimum) and share the KISAN training materials with PCVs. When in the field, PCVs will be invited to join KISAN staff trainings and staff meetings to keep abreast of the district activities and ways to complement KISAN activities. Depending on the districts for Y2, Winrock will work closely with Peace Corps to identify additional ways to integrate Peace Corps and KISAN training.

Benchmark(s): VDCs for PCVs selected, KISAN's role in PCV training identified
Resources: Staff time (Nepali staff)
Dates: March 2015 and as needed

Activity CC.5 Coordinate and collaborate with key USAID projects in KISAN districts.

PAHAL

The PAHAL project is just getting started, and the two projects have had meetings to explore collaboration. KISAN has shared information regarding the active KISAN VDCS. While it will take PAHAL time to get started, the projects have identified a few ways to move forward:

- KISAN and PAHAL will share a national advisory committee.
- KISAN will share its approach to working with marketing and planning committees.
- Once PAHAL district based staff are in place, the project staff will share workplans.

CSISA

KISAN will coordinate with CSISA on multiple levels (see Outcomes 1 and 3) including working with CSISA to hold the Seed Summit, conduct exposure visits to CSISA sites to disseminate technologies, and identify technologies farmers could adopt including improved seed varieties. KISAN will roll out CSISA's training materials and engage CSISA's staff to train KISAN LSPs and staff on maize, rice, and lentil production. KISAN will engage CSISA to provide training to grantees, such as maize feed companies, to provide training to their newly acquired technical training providers. KISAN will link points of contact to CSISA staff to ensure free flow of information.

SUAAHARA

KISAN will coordinate with Suaahara where feasible, including co-locating offices where possible and holding regular program meetings at the district level. In early April, KISAN and Suaahara will hold a coordination meeting in the Regional Office (Nepalgunj) to discuss opportunities for collaboration, for example, inviting Female Community Health Volunteers to KISAN agriculture trainings that are in their vicinity and to establish the timing and frequency of program meetings.

LEVERAGING RESOURCES

KISAN will achieve its goal by working with various partners and ensuring KISAN's activities are supported by the private sector, local governments, and other donors. In this way, KISAN works in concert with others, not independently.

Activity CC.6 Leverage district-based resources. District Coordinators will identify key public and private sector actors and approach them to establish working relationships with KISAN beneficiary farmers and service providers. This will include:

a. Working with district and VDC-level government bodies to mobilize funds to support KISAN beneficiaries in implementing what they learned from KISAN trainings; KISAN will also approach quasi-government bodies such as the Federation of Nepalese Chamber of Commerce and Industries (FNCCI) and Agro Enterprise Center (AEC) where applicable.

b. Working with KISAN beneficiaries to identify and access funds from government and the private sector, including VDC block grants and Raising Incomes of Small and Medium Farmers Project (RISMFP), HVAP, and PACT.

c. Working with other development projects to help common beneficiaries leverage knowledge gained from KISAN trainings.

Activity CC.6.1 General district-level stakeholder coordination interactions (GON, private sector, and NGO). KISAN staff will conduct half-day events in all 20 districts to foster opportunities for collaboration. All participating organizations will present activity updates highlighting completed/ongoing collaborative activities or potential areas for collaboration. This will include interactions with the private sector and financial intermediaries, mobile money companies, and product vendors.

> **Benchmark(s)**: District stakeholder mapping; VDC block grants and external grants; government/non-government linkages/partnerships along KISAN commodity chains; 20 linkage creation/orientation workshops in each district
> **Resources**: Meeting costs; Winrock's PPP Manager, regional and district KISAN staff time
> **Dates**: November – ongoing

Activity CC.6.2 Regional reviews and planning with collaborating partners (GON, private sector, and NGOs). KISAN will conduct bi-annual regional level review meetings with existing partners and collaborators, including those with MOUs (e.g., Helvetas, MFIs, Agricare). Individual review meetings will take place at partner/KISAN offices to assess ongoing activities and to plan new ones.

> **Benchmark(s):** VDC block grants and external grants; government/non-government linkages/partnerships along KISAN commodity chains
> **Resources:** Travel and accommodation costs for related KISAN staff; meeting costs
> **Dates:** November and May

V. MONITORING AND EVALUATION (M&E)

M&E activities focus on two key objectives: 1) fulfilling USAID/Nepal and FTF data requirements and reporting on progress; and 2) providing feedback to project staff, partners, and beneficiaries to facilitate

learning and adaptive management. Project evaluation will be conducted by a third party contracted by USAID/Nepal.

Monitoring and learning resources: M&E resources will be expanded in FY2015, and titles, job descriptions, and processes will be revised to reflect a new emphasis on learning and adaptive management. The core M&E Team includes the M&E Director, M&E and Learning Manager, and GIS Specialist based in Kathmandu; the Regional M&E Manager, four Cluster M&E Supervisors (new position), 20 District M&E Assistants (replacing interns) in the field, and the M&E Advisor based in the U.S. (new position). The M&E Advisor is a senior M&E specialist who will be on retainer to provide technical assistance in the field and through Skype calls and e-mails at the request of the project. The Bureau of Food Security's (BFS) FTF M&E Advisor assigned to Nepal has encouraged the M&E Team to reach out to him and his colleagues as needed to ensure that KISAN data collection and analysis meet FTF requirements. The COR will be copied on all communications with BFS/FTF.

Activity M&E.1 Maintain web-based interactive monitoring and evaluation database (WIKISAN) and update as needed. WIKISAN consolidates performance indicator data, decentralizes data entry to the district level, and allows managers to easily access data to track progress. It also supports data quality assurance (DQA) activities and geo-enabled performance reporting. It is modified as needed to: a) respond to USAID requests for new indicators or disaggregation, and b) correct data issues by debugging and incorporating new tools for data cleaning.

> **Benchmark(s):** WIKISAN system maintained
> **Resources:** GIS Specialist, M&E and Learning Manager, Database Specialist (subcontractor) and Developer (subcontractor)
> **Dates:** Ongoing

Activity M&E.2 Revise the M&E Plan. The M&E Team will revise the M&E Plan to align with the USAID/Nepal PMP, BFS/FTF M&E guidance documents, Contract SOW, and guidance received from the COR and BFS/FTF M&E Advisor. This includes but is not limited to streamlining indicators, updating targets, writing the theory of change, and identifying M&E staffing needs.

> **Benchmark(s):** M&E Plan approved
> **Resources:** M&E and Learning Manager and M&E Advisor (consultant)
> **Dates:** May 15, 2015

Activity M&E.3 Update data collection forms to align with indicators in M&E Plan. All data collection forms will be reviewed and revised as needed to ensure alignment with the agreed indicators and disaggregation requirements. For example, the farmer intake form that is completed at the time of mobilization will be revised to document baseline conditions. In addition, new forms will be created. For example, the BFS/FTF M&E Advisor recommended that Agriculture Technicians and LSPs record monitoring information each time they visit a farmer in the field, using a checklist. The checklist will record, at a minimum, the reason for the visit, recommendations, and verification of crops planted and technologies applied.

Benchmark(s): Forms revised as needed
Resources: GIS Specialist, M&E and Learning Manager, and M&E Advisor (consultant)
Dates: May 2015

Activity M&E.4 Design, produce, and disseminate Farm Logbooks, Training Certificates, and Entrepreneur Certificates. KISAN-supported farmers have been encouraged to keep logbooks since farmer mobilization activities began. The M&E Team estimates that approximately 60 percent have been complying. In FY2015, the project will increase support to farmers related to recordkeeping. A branded logbook will be designed, produced, and disseminated to farmers. It will include simple forms to help them record crops, inputs, technologies, number of hectares, yields, and sales more completely and accurately. TAs and LSPs will review and stamp logbooks at each visit, and refer those who require assistance to lead farmers or others in their communities. Farmers who complete the formal training will be awarded with a Training Certificate, and those who keep good records will be acknowledged with an Entrepreneur Certificate at the end of their first year, or at other times where appropriate.

Benchmark(s): Farm logbooks disseminated
Resources: The M&E and Learning Manager and GIS Specialist will train the Regional M&E Manager and Cluster M&E Supervisors (x4), who in turn will train District Coordinators, Project Officers, District M&E Assistants, Agricultural Technicians, LSPs, and Savings and Loan Cooperatives
Dates: June 2015

Activity M&E.5 Hire new M&E staff. The M&E Team will hire staff to fill the following new positions: 4 Cluster M&E Supervisors and 20 District M&E Assistants. Existing staff and interns who have performed well will be considered first. Interns will be replaced with District M&E Assistants upon completion of their six-month terms. Some interns may have their terms extended to allow time for recruitment of a more qualified person.

Benchmark(s): M&E positions filled with qualified staff
Resources: M&E Director, M&E and Learning Manager, Regional M&E Manager, and District Coordinators
Dates: June and as needed

Activity M&E.6 Training on data collection, entry, and quality analysis. The M&E Team will train project and partner staff on data collection forms, farm logbooks, geo-referencing tools (GPS and Google Earth), data entry into WIKISAN, data quality assurance, and backup documentation requirements. A TOT will be used, overseen by the Central M&E Team based in Kathmandu. Training will be provided as soon as possible after hiring or partnering. Refresher courses will be provided as needed based on data quality issues identified through the DQA process (such as spot checks and database queries).

Benchmark(s): New project staff members, partners, and farmers are trained in a timely manner and receive refresher training as needed

Resources: The M&E and Learning Manager and GIS Specialist will train the Regional M&E Manager and Cluster M&E Supervisors (x4), who in turn will train District Coordinators, Project Officers, District M&E Assistants, Agricultural Technicians, LSPs, and Savings and Loan Cooperatives
Dates: Ongoing

Activity M&E.7 Routine monitoring and data collection. Project and partner staff involved in mobilizing and training farmers will collect baseline information from farmers using the initial intake form. Thereafter, those involved in providing extension services will record information from field visits using a checklist form. Forms will be on paper or electronic tablets. Farmers will keep a log of crops, inputs, technologies, yields, and sales, using a branded logbook provided by the project.

Benchmark(s): Decentralized data collection and entry performed in a timely, complete, and accurate manner
Resources: Central M&E Team, Regional M&E Manager, and Cluster M&E Supervisors
Dates: Ongoing

Activity M&E.8 Spot checks and Data Quality Analysis (DQA). DQA is conducted at multiple levels. In the field offices, Agriculture Program Officers (APOs), Business Development & Supervisor Officers (BDSOs), and District Coordinators (DCs) review and approve completed data collection forms for accuracy. The central M&E Team, Regional M&E Manager, and Cluster M&E Supervisors will conduct spot checks through field visits and database queries for DQA and verification.

Benchmark(s): Project data and backup documentation is complete, accurate, and otherwise evaluation and audit-ready
Resources: Field based managers and M&E staff
Dates: Ongoing

Activity M&E.9 Geo-enabled data maintained. In accordance with USAID's Forward Policy, USAID/Nepal requires KISAN to geo-reference the following project data: (a) baseline, (b) results, (c) beneficiaries, (d) outputs, (e) activities, and (f) resources. WIKISAN data will be imported to a GIS database and will be disaggregated at VDC and district levels. In turn, the GIS database will be used to generate maps for project reports and to respond to ad hoc requests from USAID/Nepal.

Benchmark(s): Data in GIS database is complete and updated on a quarterly basis, and as needed to respond to ad hoc requests from USAID/Nepal or KISAN managers
Resources: GIS Expert
Dates: Ongoing

Activity M&E.10 Data entered into USAID's FTFMS and TraiNet databases. The GIS Specialist will enter results data into FTFMS on an annual basis and training related data into TraiNet on a quarterly basis.

Benchmark(s): Specifications for WIKISAN, disaggregated reports, tools for data cleaning (as required by USAID)

Resources: GIS Specialist
Dates: January 30, April 30, July 30, and October 30 (TraiNet) and October 30 each year (FTFMS).

Activity M&E.11 Survey to collect baseline data and FY2014 results and update data in FTFMS. The M&E Advisor will work with the central M&E Team to design a survey to collect baseline data and FY2014 results. Baseline data collection efforts will focus on gross margins, sales, and consumption of nutrient rich crops. FY2015 results will focus on the seven Key Performance Indicators (KPIs); however, data for other indicators will be collected where feasible. The survey design will reflect guidance provided by the BFS/FTS M&E Advisor on identifying a representative sample population and the BFS/FTS M&E Guidance Series: Volume 2 Baseline Guidance (March 2014) and Volume 3 Sampling (March 2014). The survey design and workplan will be submitted to BFS/FTF, RIDA, and the COR for review prior to implementation. Data collection may be outsourced to a competent local M&E firm. The FY2014 and Baseline Survey Report will be submitted to BFS/FTF and COR for review prior to updating in FTFMS. Baselines, results, and targets will be adjusted accordingly.

Benchmark(s): Survey design and workplan approved and implemented and FTFMS updated
Resources: Central M&E Team, M&E Advisor (consultant), and Local Survey Firm (subcontractor)
Dates: March-May 2015

Activity M&E.12 Survey to collect FY2015 results data. Using the survey design and forms developed for the FY2014 survey, the M&E Team will oversee a survey to collect FY2015 results data. The Local Survey Firm subcontracted to perform the prior survey will be used for data collection, provided that they performed well. The FY2015 Survey Report will be submitted to BFS/FTF and COR for review prior to updating the FTFMS and finalizing the Annual Report.

Benchmark(s): FY2015 data available for Annual Report and FTFMS
Resources: Central M&E Team, M&E Advisor (consultant), and Local Survey Firm (subcontractor)
Dates: August-October 2015

Activity by Third Party: Mid-Term Performance Evaluation. In accordance with USAID Evaluation Policy, USAID/Nepal will contract an M&E firm to conduct a mid-term performance evaluation. This activity is included in KISAN's Work Plan to flag potential dates for the COR. In January 2015, USAID/Nepal released an RFP for an M&E and Learning contractor. Although neither KISAN nor the Mission's FTF portfolio are listed in the "Current Schedule of Performance and Impact Evaluations" attached to the RFP, the pending contractor may be a potential source for this evaluation.

Benchmark(s): KISAN or Nepal FTF Portfolio Mid-Term Evaluation
Resources: Third Party M&E Firm
Suggested Dates: November – December 2015 or January-February 2016

VI. OPERATIONAL, ADMINISTRATIVE, AND FINANCIAL ACTIVITIES

Activity OP.1 Submit key deliverables to USAID/Nepal. During Y3, Winrock produce deliverables as such as the quarter performance reports and an annual report.

Benchmark(s): Approved deliverables
Resources: Staff and partner time to develop the documents; Home Office Coordinator travel; Requires USAID approval
Dates: Quarterly Performance Reports April 30 and July 30 2015

Activity OP.2 Implement Branding and Marking Plan. Winrock and its subcontractors will adhere to the branding policy as provided to USAID.

Benchmark(s): Correct USAID project branding
Resources: Communication and administration staff, District Coordinators
Dates: Ongoing

Activity OP.3 Staff recruitment and training. KISAN's adjusted approach will require additional and new skills. KISAN will be recruiting and training staff to accomplish the objectives in the next 2.5 years.

Benchmark(s): Staff hired
Resources: Variety of KISAN staff for developing SOWs, hiring
Dates: Ongoing

Activity OP.4 KISAN Review and Planning Workshops. KISAN will conduct a mid-year review workshop in April, followed by a planning workshop in September 2015. Officers and District Coordinators from all districts as well as regional and central office staff will participate in these workshops. The April workshop will cover the new approach (review of grants, commodity chain activities) and will allow staff to sharing lessons learned and engage in teambuilding.

Benchmark(s): Review and planning workshop conducted
Resources: Staff time, travel cost
Dates: April and September 2015

VII. ANNEXES

ANNEX A. ACTIVITIES TABLE

KEY

WI	Winrock International
CEAPRED	The Center for Environmental and Agricultural Policy Research, Extension and Development
DEPROSC	Development Project Service Center Nepal

Tasks and Activities		Responsibility	YEAR THREE (MARCH – SEPTEMBER 2015)						
			Mar	Apr	May	June	July	Aug	Sept
Outcome 1: Improved access to increased quality inputs for farmers									
Activity A.1.1	**Increase the quantity and improve the quality of seed inputs for rice, maize, and lentils**	WI							
Activity A.1.1.1.	Increase certified seed production	WI							
Activity A.1.1.2	Seed companies with improved marketing and distribution to KISAN VDCs	WI							
Activity A.1.1.3	Work with CSISA to plan and host Seed Summit	Consultant							
Activity A.1.2	**Strengthen input supply chains of irrigation, water storage products**	WI, DEPROSC							
Activity A.1.2.1	Support farmers in establishing irrigation schemes	WI, DEPROSC							
Activity A.1.3	**Increase credit availability in KISAN districts and along KISAN commodity chains**	WI, DEPROSC							
Activity A.1.3.1	Coordinate MFIs with other finance activities in the KISAN districts	WI, DEPROSC							
Activity A.1.3.2	Link banks with wholesale financiers with potential agribusiness vendors and local MFIs	WI, DEPROSC							

Activity A.1.3.3	Strengthen cooperatives and link with KISAN farmers	WI, DEPROSC								
Activity A.1.3.4	Train farmers and farmer groups on how to access credit	WI, DEPROSC								
Activity A.1.3.5	Facilitate loans with commercial enterprises	WI, DEPROSC								
Outcome 2: Improved capacity of agriculture extension workers, services providers, and farmers										
Activity A.2.1	Continue to strengthen change agents	WI								
Activity A.2.2	Embed sustainable agriculture training services within companies and cooperatives	WI, CEAPRED, LSP								
Outcome 3: Improved and sustainable agriculture production and post-harvest technologies and practices adopted at the farm level										
Activity A.3.1	Identify new technologies to introduce to farmers	COP, DCOP								
Activity A.3.2	Establish demonstration plots	WI, CEAPRED, LSP								
Activity A.3.3	Organize exposure visits	WI, CEAPRED								
Activity A.3.4	Develop and disseminate extension messages	Component A Manager (Ag Expert), WI								
Activity A.3.5	Promote agriculture mechanization									
Outcome 4: Improved market efficiency										
Activity A.4.1	Strengthen MPCs	Outcome 2 and 4 Managers, WI, STTA								
Activity A.4.2	Conduct exposure visits	Assistant Marketing Director								
Activity A.4.3	Strengthen wholesale markets	Consultant								
Activity A.4.4	Strengthen market linkages	WI								
Activity A.4.5	Provide grant to establish ICT marketing information system needs	WI, CEAPRED								
Activity	Engage processors in training farmers									

A.4.6			
Outcome 5: Increased capacity of GON and local organizations			
Activity A.5.1	Strengthen entrepreneurial and organizational skills of small enterprises and community-based organizations	WI	
Grants Under Contract			
Activity GUC. 1	Revise GUC Manual	WI	
Activity GUC.2	Request solicitations for grants	WI	
Activity GUC. 3	Provide pre-application orientations/workshops to potential grantees	WI, BDSO	
Activity GUC. 4	Review concepts; request proposal	WI	
Activity GUC. 5	Award grants to provide post-award training	WI	
Activity GUC. 6	Monitor and Evaluate Grants	WI	
Coordination and Collaboration			
Activity CC.1	Conduct National Project Advisory Committee	WI	
Activity CC.2	Participate in District Agriculture Development Committee (DADC) meetings	WI	May vary as per district meeting schedules
Activity CC.3	Coordinate and link with GON and other Feed the Future projects	WI	
Activity CC.4	Integrate Peace Corps Volunteers	WI	As needed
Activity CC.5	Coordinate and collaborate with key USAID projects in KISAN districts	WI	
Activity CC.6	Leveraging district-based resources	WI	
Activity CC.6.1	General district-level stakeholder coordination interactions (GON, private sector, NGO)	WI	
Activity CC.6.2	Regional reviews and planning with collaborating partners (GON, private sector, NGO)	WI	
Monitoring and Evaluation			
Activity M&E.1	Maintain web-based interactive monitoring and evaluation database (WIKISAN) and update as needed	WI	

Activity M&E.2	Revise the M&E Plan	WI, STTA							
Activity M&E.3	Update data collection forms to align with indicators in the M&E Plan	WI							
Activity M&E.4	Design, produce, and disseminate Farm Logbooks, Training Certificates, and Entrepreneur Certificates	WI, STTA							
Activity M&E.5	Hire new M&E staff	WI					As needed		
Activity M&E.6	Training on data collection, entry, and quality analysis	WI							
Activity M&E.7	Routine monitoring and data collection	WI							
Activity M&E.8	Spot checks and Data Quality Analysis (DQA)	WI							
Activity M&E.9	Geo-enabled data maintained	WI							
Activity M&E.10	Data entered into USAID's FTFMS and TraiNet databases	WI							
Activity M&E.11	Survey to collect baseline data and FY2014 results and update data in FTFMS	WI							
Activity M&E.12	Survey to collect FY2015 results data	WI							
Third Party Activity	Mid-Term Performance Evaluation	Third Party M&E Firm							
Operational, Administrative, and Financial Activities									
Activity OP.1	Submit key deliverables to USAID/Nepal								
Activity OP.2	Implement Branding and Marking Plan								
Activity OP.3	Staff recruitment and training								
Activity OP.4	KISAN Review and Planning Workshops								

ANNEX B. LIST OF KISAN TECHNOLOGIES

Technology Category	KISAN Improved Technology	Maize	Rice	Lentil	Vegetable												Seed		
					Tomato	Cauliflower	Cabbage	Cucumber	Chili	Long Bean	Onion	Spinach	Bottle Gourd	Bitter Gourd	Pumpkin	Brinjal	Okra	Rice Seed	Maize Seed	Lentil Seed
Land improvement/ preparation practices	Soil solarization	N	N	N	Y	Y	Y	Y	Y	N	Y	N	Y	Y	Y	Y	Y	N	N	N
	Terrace improvement	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Type of soil for suitability of different crops	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Crop genetics	Adopting improved and quality seed variety	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Pest and disease tolerant variety	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y
	Use of drought tolerance seed variety	Y	Y	N						N		N						Y	Y	N
Nursery management	Raised/low bed nursery	N	Y	N	Y	Y	Y	Y	Y	N	Y	N	Y	Y	Y	Y	N	Y	N	N
	Polypot/polybag, tray nursery	N	N	N	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	N	N	N	N
	Machan/Tar nursery	N	N	N	Y	Y	Y	Y	Y	N	Y	N	Y	Y	Y	Y	N	N	N	N
	Use of soil suitable media (cocopeat, well decomposed compost)	N	Y	N	Y	Y	Y	Y	Y	N	Y	N	Y	Y	Y	Y	N	Y	N	N
	High bed nursery (tand)	N	N	N	Y	Y	Y	Y	Y	N	Y	N	Y	Y	Y	Y	N	N	N	N
	Mulching (nursery management)	N	N	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	N	N	N
Management practices	Use of plastic house/tunnel	N	N	N	Y	N	N	Y	N	N	N	N	Y	Y	Y	N	N	N	N	N
	Cost of production	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Marketing cost	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Technology Category	KISAN Improved Technology	Maize	Rice	Lentil	Vegetable												Seed		
					Tomato	Cauliflower	Cabbage	Cucumber	Chili	Long Bean	Onion	Spinach	Bottle Gourd	Bitter Gourd	Pumpkin	Brinjal	Okra	Rice Seed	Maize Seed	Lentil Seed
	Use of MIT (drip/sprinkler/MUS/treadle pump/plastic pond)	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
	Agronomy management (complementary mix, inter-cropping, mixed cropping, relay cropping, crop rotation)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Market led production plan	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Business plan	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Raised bed	N	N	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	N	N
	Mulching (management practices)	N	N	N	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y	N	N	N
	Off-season cultivation	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	N
	Use of nutrients and lime	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Line sowing, adequate spacing (both plant-to-plant and row-to-row)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y
	Roughing	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y
	Maintain proper isolation distance	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y
	Direct seeding in case of rice, maize, and lentil	N	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	N	Y
Cultural practices	Adequate use of manure	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Raised bed farming	N	N	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	N	N

Technology Category	KISAN Improved Technology	Maize	Rice	Lentil	Vegetable												Seed		
					Tomato	Cauliflower	Cabbage	Cucumber	Chili	Long Bean	Onion	Spinach	Bottle Gourd	Bitter Gourd	Pumpkin	Brinjal	Okra	Rice Seed	Maize Seed	Lentil Seed
	Early, timely, late sowing	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
	Timely irrigation	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Timely weeding	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Staking, mulching	N	N	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	N	N
	Use of lure and traps	N	Y	N	Y	N	N	Y	N	N	N	N	Y	Y	Y	N	N	Y	N	N
	Use of bio-fertilizer	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
	Balance use of fertilizer	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Adoption of IPM practices	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Judicial use of pesticides; use of Class III and IV pesticides	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Use of jholmol (liquid manure)	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
	Use of hormones for female flower induction (e.g. miraculan)	N	N	N	N	N	N	Y	N	N	N	N	Y	Y	Y	N	N	N	N	N
	Proper handling of sprayer	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Harvest and post-harvest	Seed bin	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y
	Grading, cleaning, sorting and packaging	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Use of super grain bags	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y
	Harvesting time (based on crop type) and time of harvest	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

ANNEX C. COMMODITY AND INPUT SUPPLY CHAIN APPROACHES

LENTIL COMMODITY CHAIN

Overview

As compared to other crops, lentils are relatively high-value and are an important protein source for farmers. Nepal has the potential to export lentils, so the market is quite large. While farmers traditionally raise pulses on their bunds, there is scope to increase lentil production using improved seed and teaching improved techniques which could increase the farmer's income.

Key challenges on the commodity chain as related to smallholder production

- Farmers do not view lentils as a profitable crop, and they don't understand the value of the crops as they are not connected to the market (millers and retailers);
- The adoption of improved crop management practices at farmers' level is very low;
- Low productivity due to (i) low seed replacement rate, and inadequate use of improved seed; (ii) insufficient seed treatment with Rhizobium culture; (iii) use of relay cropping with paddy instead of mono-cropping, (iv) lack of light irrigation before flowering, basal doze of fertilizer, and v) inadequate use of herbicide to control weed problem;
- Limited or late arrival of fertilizer;
- Lack of contract farming law;
- Shortage of quality foundation seed; therefore, farmers lack access to improved certified seed and to other inputs including herbicides, fertilizers, and mechanization (lentil bed planter); and
- Farmers do not clean and grade lentils and suffer from high post-harvest losses.

KISAN's theory of change and focus

If lentil mills adjust their business model and hire technicians to provide training to lead farmers within their business practice, they will increase their revenue and profit by improving the quality and quantity of lentil supply. If smallholder farmers understand the economics of raising lentils and adopting new technologies and are linked to the lentil mill to sell their product, then they will raise their income.

Assumptions

- Farmers are interested in increasing quality and quantity of lentil production;
- Mills purchase lentils produced by member farmers at fair prices;
- Larger millers are interested in and have the capacity to purchase lentil volumes from cooperatives in the geographic focus area;
- Farmers will sell to the mills that provide them training (they honor contracts) despite the fact there is no law to enforce contract farming; and
- Necessary inputs are available, including fertilizer.

Strategy for improving lentil production

KISAN will narrow assistance in six lentil production districts in the Terai: Kailali, Bardiya, Banke, Dang, Kapilvastu, and Kanchanpur. While it is unclear at this point how many and which lentil mills KISAN will partner with, the projected has targeted four lentil mills for discussions: Pooja Dal Mill, Nepalgunj; Gyan Food Product, Nepalgunj; Kohinoor Agro Industries Dhangadi; and Hitesh Dal Udyog, Nepalgunj.

During 2015, KISAN will provide direct support to lead farmers within cooperatives to improve productivity and KISAN will link these cooperatives consisting of smallholder farmers with lentil mills. TOT will be provided to lead farmers, who will be expected to train other members of their cooperative. The project will provide trainings and demonstrations throughout the growing season on key topics such as on weed/crop rotation management, weed management, harvesting, and seed treatment/soil preparation. These formal TOTs will be supplemented with demonstrations on weed management, fertilizer application, cleaning, sorting, and grading, and frequent follow-ups.

Before the end of the lentil season, KISAN will meet with key mills that have the greatest potential and interest to increase lentil production with farmers in the KISAN districts. KISAN will link the mills with the cooperatives that are raising lentils so that the farmers can sell the lentils. This will be followed by a workshop with the lentil mills to discuss an alternative business model by which they hire agriculture technicians/LSPs to train the cooperatives directly, develop demonstration plots, and promote mechanization.

KISAN will consider providing the entrepreneurial members of the cooperative in-kind grants for lentil cleaners so that they can provide a fee-based service to clean and sort lentils for their neighboring farmers. This entrepreneur would receive additional training on how to create an enterprise as well as technical training on how to properly use and maintain the lentil cleaner, business principles, how to access credit and loans, and how to develop a business plan.

During 2015, KISAN will seek to support mills with grants and by providing business services (consultants to help develop business plans). As appropriate, KISAN will help link the mills with financial institutions.

KISAN will also work facilitate linkages between cooperatives and financial institutions and millers via workshops. Cooperatives typically purchase lentils directly from the farmers, then sell the lentils to a miller or aggregator. In order to ensure that cooperatives have adequate funds to purchase farmers' lentil yields at fair market prices, KISAN will link cooperatives to financial institutions and providing trainings on loans, credit, etc. KISAN will also train the cooperative managers, who negotiate with aggregators for prices, on business skills, negotiation, quality control, etc., then link cooperatives with larger millers through workshops. KISAN may also work with seed companies to provide demonstrations, which would benefit both smallholder farmers (they could learn and observe lentil production techniques, benefits of better seed varieties) and seed companies (they could potentially sell more seeds).

Productivity can be increased by introducing high yielding seed varieties and improved cultivation practices like the use of quality seeds, weeding, applying nutrient management, and disease management. Yield potential of the improved variety lentils being released by NARC is reported to be 1.5-2 MT/ha. Khajura -1, Khajura -2 and Simal varieties are in use in Nepalgunj areas and nearby districts for more than 10 years, and purity of this variety have gone to a very low level. Price of improved seed in the market is considered to be high (Rs 100-120 per kg), and about 60-70 percent farmers' use their own production or production of neighbors as seed.

Activities

Lentil Production Approach: 2015

1. Conduct TOT trainings for lentil production cooperatives' lead farmers who in turn will train lentil farmers. Training topics include:
    - Lentil Production Management training, including seed treatment, land preparation seed sowing;
    - Post-harvest management;
    - Weed management;
    - Harvesting of lentil; and
    - Basic business planning.
2. Conduct demonstrations on:
    - Lentil production demonstration using pre-emergence herbicides;
    - Chemical fertilizers, seed treatment, rhizobium culture;
    - Cleaning and grading lentils using screens (sieves); and
    - Improved storage using *super grain poly bag.*
3. Strengthen cooperatives.
    - Improve access to finance for cooperatives through workshops with financial institutions and training on how to access credit, loans, etc.; and
    - Business planning.
4. Strengthen linkages between farmers, cooperatives, and mills.
    - Organize exposure visits between mills and production blocks; and
    - Conduct interaction workshop between producers and buyers.
5. Strengthen lentil mill role in improving production.

- Conduct workshop with mill owners to discuss alternative business plan to embed technical assistance to farmers; and
- Provide business planning consulting services to mill owners.

6. Improve lentil seed production (see Seed Input Supply Chain).

Lentil Production Approach: 2016-2017

1. Provide grant to mills to hire technicians and conduct trainings and demonstrations.
2. Provide TOT to technicians.
3. Monitor farmers' progress.
4. Continue to improve seed production.
5. Reduce post-harvest losses and improve storage technology by embedding lentil cleaner within each cooperative, training on post-harvest practices (cleaning, grading, collective marketing), and demonstrations of post-harvest technologies.

MAIZE COMMODITY CHAIN

Overview

Maize is the second most important food crop in Nepal and is a staple for many people in the hills. It is versatile crop as it can be produced in the hills and Terai, in rain-fed and irrigated land, and can be raised in the summer, spring, and winter. Maize is an important crop for subsistence farmers' home consumption (especially in the hills), but is increasingly in higher demand by the feed industry (primarily in the Terai). Maize is also sold and eaten as a green corn which can be incredibly high-value for farmers near urban markets.

Key challenges on the commodity chain as related to smallholder production

Terai

- Farmers are not using improved seed or other improved technologies;
- Summer crop is contaminated with fungus;
- Need to replace wheat with maize on irrigated land; and
- Lack linkages with buyers and awareness of market demand (quality, etc.).

Feed Mills

- Do not have experience raising maize (either entrepreneur or poultry expert) and
- Do not have plans to work with or identify farmers.

Hills

- Farmers lack access to new seed and agronomic and post-harvest technologies.

KISAN's theory of change and focus

Terai

If feed mills adjust their business plans and hire agriculture technicians who work with farmer production areas through demonstrations, trainings, and follow up help on production and post-harvest practices, then famers could reduce post-harvest issues (particularly aflatoxin, a primary weakness for mills) and increase productivity and incomes by selling to the feed mills.

Assumptions

- Farmers can sell the maize to the mills for a profit at a rate cheaper or equal to the cost of maize carried from India;
- The Nepali farmers can produce fungus-free maize;
- Mills require minimum volume of produce per collection visit;
- Farmers will replace the wheat crop with maize;
- Feed mills are willing to expand their business to hire agriculture technicians; and
- Fertilizer and seed is available.

Hills

If agrovets and LSPs can provide farmers embedded training on new technologies, and conduct demonstration plots or field days, then agrovets and service providers could increase their income from sales and farmers can improve their production and food security.

Assumptions

- Farmers recognize the return on investment in agriculture – they treat agriculture like an enterprise and investment (so they will pay for inputs);
- The literacy class is conducted in areas where farmers are more risk adverse lack entrepreneurial skills;
- Key inputs (seed and fertilizer) are available in the hills in time for the crop;
- Agrovets and LSPs are interested in learning the technical agriculture; and
- Farmers have the income and space to invest in improved post-harvest storage (hermetically sealed bags).

Strategy for improving maize production in the Terai

KISAN will increase gross incomes and incremental sales of smallholder farmers in four Terai districts (Kailali, Kanchanpur, Banke, and Bardiya) and Dang by working through feed mill companies to develop agriculture extension services. KISAN will seek to pilot grants for feed companies to hire agriculture technicians to increase production by providing technical assistance to farmers. KISAN will provide

business planning and technical training to agrovets and other support to help them develop sustainable agriculture support for farmers.

KISAN will help the feed mills identify farmer cooperatives and production pockets that may include large and smallholder farmers. KISAN will initially provide training to farmers as the feed mills develop their plans and hire their agriculture experts. KISAN will mentor the mills' technical experts once they are hired.

Strategy for improving maize production in the hills

The focus in the hills will target improving household food security by increasing productivity through the introduction of improved technologies. The project will work with agrovets and LSPs (both embedded LSPs/agriculture experts in cooperatives/groups and KISAN LSPs/Agriculture Technicians), who will be working with the vegetable commodity chains, and connect them with the DADO and other maize agronomists.

Strategy for improving maize seed production and availability

KISAN will also improve the availability of maize seed by strengthening seed companies to expand their production in the KISAN zone of influence. KISAN will identify seed cooperatives in Palpa, Surkhet, Dang, and Salyan to increase farmers' production of and access to seed. The project will also strengthen the ability of the GON to provide seed quality certification and improve seed growing cooperatives' post-harvest storage.

Credit to bolster maize commodity chain

At the higher levels of the commodity chain, KISAN will link feed mills with the credit opportunities based on financial planning needs. At the agrovet, seed cooperative, and farmer levels, KISAN will link beneficiaries to existing savings and credit cooperatives.

Activities

Terai feed mill approach

1. Award grant to Nimbus International Company Pvt. Ltd. Establish Nimbus Krishi Kendra (NKK, franchise of agrovets/input suppliers) agrovets in KISAN project areas and link with farmers to increase farmers' access to improved agricultural inputs in four districts (Banke, Bardiya, Dang, and Kailali) and to provide farmers with a buyer of their maize yields. Nimbus will build the capacity of agrovets through trainings; Nimbus will also train farmers on improved cultivation practices including demonstrations in farmers' plots. Technologies to be demonstrated include stripe test of the given crop varieties, chemical treatment, fertilizer response trials, and space testing of different varieties. Nimbus will also provide support to farmers and agrovets in accessing credit. Nimbus will also mobilize trained KISAN LSPs in NKK as extension agents.

2. Conduct workshop with key higher level commodity chain actors. The objective of this workshop is to discuss how the feed mills can expand business, possible solutions, and how to apply for grants.
    a. Identify training needs such as business and financial planning and design follow up training. Based on financial needs link with financial institutions (2015).
3. Identify and orient Terai production blocks (cooperatives, and other farmers both large and smallholders) that can serve as pilots to replace wheat production on irrigated land with spring and winter maize production. Identify LSP/agrovet for each production block. (Summer 2015).
4. Provide training to agrovets, farmers, LSPs, feed mills, and GON on new technologies for production and post-harvest management including spacing, agronomic management, grading, cleaning, sorting, packaging, and harvesting time. Link farmers/agrovets to credit opportunities (August 2015).
5. Have feed mill agrovet serve as buyer and collector of maize (January, June 2016).

Commercial maize seed production approach in the Hills (DANG, Palpa, Salayan, Surkhet)

1. Conduct workshop or meet individually with seed companies and identify who is interested in expanding production in targeted districts and sales in all districts. Identify capacity and training needs of companies and financial requirements. Explore developing hills-based storage facilities. Orient them to our grants program and APS. Support companies by linking them to seed production cooperatives.
2. Identify seed production cooperatives and local agriculture technicians. Link them to companies and provide technical training. Encourage companies to hire local technicians.
3. Build capacity of GON seed quality control staff to increase district-based third party certification.
4. Link hill-based seed producers with local agrovets or farmers for farmer seed exchange and to increase seed in the mid-hills.

Increasing maize productivity in the hills

1. Strengthen agrovets and LSPs that we are already working with in high-value agriculture to ensure they understand maize production and storage and that they have link to additional expertise as needed.
2. Collaborate with CSISA on demonstrations and conduct farmer field days for all farmers on cultivation, seed and post-harvest.
3. Provide training to farmers on cultivation, post-harvest and economics of improved varieties and technologies.
4. Link farmers to savings and cooperatives.

RICE COMMODITY CHAIN

Overview

Rice is the single most important crop in Nepal and consumed by many people twice a day. Urban consumers prefer fine-grained rice, and millers cannot meet the demand so they import rice from India. While it may seem that there are economic opportunities for rice production for smallholder farmers, India's open boarder may make it difficult for farmers to compete. India's agriculture is heavily subsidized, landholdings are generally larger, and they have invested in mechanization. While in Nepal, key inputs such as rice, seed, and fertilizer are often unavailable at the time of planting. Smallholders are not in the position to invest in capital-intense machinery. Moreover, in India, rice seed is readily available, making the cost of production less than in Nepal. In the Nepal, most risk adverse smallholder farmers prefer to raise course rice because the yields are higher.

It probably does not make economic sense for rice mills to vertically integrate and link with smallholder farmers to produce for the fine-rice market given many of the challenges. However, there are areas where KISAN can link rice farmers to mills and there are some key investments that KISAN can promote that can have a large impact on rice productivity including training LSPs on seed and improving productivity by increasing access to seed.

Challenges on the commodity chain as related to smallholder production

- Rice is such an important crop that many farmers will plant several varieties to ensure they have enough for their own home consumption.
- Nepali smallholder famers that have small patches of land and are not in the position to invest in expensive machinery.
- Lack access to timely and quality seed and fertilizer.
- Low seed replacement and varietal replacement, due to the unavailability of seed, is limiting rice production.
- Lack of understanding of good management practices and storage practices.
- Competition from India. Due to subsidies and traders bringing rice from India across the border, farmers in Nepal cannot compete with the low prices based on subsidized production.
- Lack of a contract farming law in Nepal is a disincentive for vertical integration (where miller contract with famers).
- Small, fragmented landholdings are a disincentive for farmers to invest in new technologies.
- Lack of knowledge on best practices and post-harvest management.

KISAN's theory of change and focus

If seed companies increase production of key varieties in the KISAN areas, then there will be more rice seed available for farmers to buy. If KISAN trains LSPs on key technologies (adopted from CSISA) and

promotes demonstrations, then they will be able to increase their production and improve their food security. Finally, if farmers are able to hire or rent mechanized services, they will be able to adopt conservation tillage practices. If farmers can access improved post-harvest technologies and understand the benefit, they will improve their productivity by reducing post-harvest losses.

Geographic focus

KISAN will focus on rice seed production in the Terai, but will support other technologies in the mid-hills and the Terai, where the project is already working with farmers.

Assumptions

- Farmers will have access to key inputs (seeds, fertilizers);
- Youth are interested in starting an agriculture business;
- Farmers understand the economic benefit of investing in new seed and post-harvest storage facilities (super bags);
- New improved varieties do not increase the risk; and
- New varieties do not impact other cropping cycles.

Strategy for improving rice production in the Terai

KISAN will work with seed companies in Kapilvastu, Kailali, Bardiya, Kanchanpur, Dang, and Banke to increase rice seed production (see Seed Input Supply Chain). In addition, KISAN will train LSPs and other change agents throughout the Terai on improved rice practices and post-harvest practices. KISAN will, along with CSISA, create demonstration sites. In key districts, KISAN will promote LSPs to develop enterprises that offer plowing and direct seeding services to smallholder farmers. KISAN will help facilitate loan and procurement of technology.

Strategy for improving rice production in the hills

KISAN will train LSPs and develop strategically-located demonstration plots to promote best practices in rice production in each district. LSPs will be expected to work with farmers and train them on the practices (production and post-harvest).

Activities

1. Increase seed production (see full description in activity under Seed Input Supply Chain).
2. KISAN will train LSPs and agrovets so that they can train farmers in best practices in rice production. KISAN Agriculture Technicians will train farmers with LSPs as co-trainers; in following trainings, LSPs will train farmers, as the KISAN AT co-trains. Trainings will consist of two one-day trainings – one-day training on rice production and one-day training on rice IPM, post-harvest practices including grading, cleaning, sorting, storage (super grain bags), and harvesting time.

3. Establish demonstrations and conduct farmer field days to show:
    a. Variety demonstration showing hybrid versus open pollinated, hybrid versus hybrid, and open pollinated versus open pollinated.
    b. Number of seedlings (showing one, two, or three seedlings per hill).
    c. Direct seeded rice versus transplanting.
    d. Introduction of climate smart varieties (Sukha1, 2, 3).
    e. Introduction of flood tolerant variety (Swarna sub-1).
    f. Promotion of early varieties (Hardinath, Radha-4).
    g. Promotion and demonstration of rice reaper, DSR.
    h. Demonstration of super bag for storage.
4. Reinforce key messages through FM Radio spots about post-harvest practices, farmer field days, demonstration site locations, etc.

Activities in 2015

1. Develop LSPs to procure machines and sell services.

HIGH-VALUE VEGETABLES COMMODITY CHAIN

Overview

High-value vegetables can increase smallholder income and profits within three months (one cropping cycle) with relatively little investment, even if the farmer has little land. The market for vegetables, especially off-season, continues to grow as demand increases. Even in remote areas, farmers can sell their produce to their respective district center and more distant markets.

Unlike other commodity chains, the high-value agriculture commodity chain linkages have been established by donors. Moreover, the commodity chain has scattered producers who aggregate their produce with their neighbors. Traders collect the produce and bring it wholesale markets, where it is then sold to scattered retailers who could be local, in Kathmandu, or in India. There is no dominate single buyer (such as a grocery store chain), nor is there any processing that occurs. For these reasons, it is difficult to engage a single actor (such as buyer) in training farmers. To engage the private sector in the high-value agriculture commodity chain, KISAN will target input supply providers to train farmers.

Key challenges on the commodity chain as related to smallholder production

Farmers

- Lack access to markets;
- Do not adequately invest in agriculture inputs (including for services and knowledge), which requires a change in mindset. They need training on calculating investment/revenue/profit/loss;

- Smallholders are not always willing to invest money to hire an agriculture expert, so the LSPs may not be able to consistently earn a livable wage from helping smallholder farmers: larger farmers will pay;
- Lack knowledge on production, post-harvest, and marketing and need follow up throughout the season to address new diseases and pests (such as blight, damping off);
- Lack access to quality inputs and assistance;
- Farmers must aggregate to reach critical mass of produce needed to earn fair prices;
- Lack of knowledge among the producers on proper usage of fertilizers, pesticides, and soil fertility management;
- Lack of irrigation facilities;
- High post-harvest losses; and
- Limited market information.

Local service providers, agrovets

- Inadequate level of expertise and access to updated technologies to gain the confidence of farmers;
- Lack entrepreneurship skills necessary to establish a sustainable business;
- Lack of trained extension services; and
- Most agrovets are traders and are not interested in the technical aspects of farming.

Marketing and planning committees

- Do not always operate as functional group;
- Insufficient understanding of markets;
- Limited production and farmers not always producing for market demand; and
- Lack linkages/good relations with traders and wholesale markets.

KISAN's theory of change and focus

If smallholder farmers have sustained access to knowledge, continuous technical support, inputs, and markets, then they can raise high-value vegetables for the market and increase their income. For this to be successful, smallholder farmers need to consider their farm as an enterprise and need to be trained on calculating cost of inputs, revenue, and profit. They also need to understand how to access credit and calculate loan payments. Farmers new to vegetable cultivation must see the value of the agriculture inputs (tunnels, drip irrigation, hybrid seeds) before they will invest in these inputs. They also will start small (growing high-value vegetables on part of their land) and, after recognizing the potential income,

will expand their production. Once farmers have income, they can then buy improved varieties of maize, rice, and lentils and will improve their food security with improved yields.

Markets must be available for farmers. If Marketing and Planning Committees (MPCs) have enough support and enough volume, then they can train farmers, provide important marketing information to farmers, and link with key wholesale markets.

If farmers don't have entrepreneurial training, they won't see the value in paying for technical services and LSPs may not earn enough income to provide sustained services to farmers. If KISAN works through Savings and Credit Cooperatives (SACCOs) or agriculture cooperatives to hire LSPs, then farmers could have sustained technical support. If cooperatives embed agriculture technical assistance (through LSPs) within their loan services to help farmers raise high-value vegetables for the market, then they will have a better return on loans by helping farmers increase yields and income. In some of the more remote districts where infrastructure is poor and the price of production/transportation is higher, the private sector LSP model will not likely work. In such cases, KISAN will encourage the government to provide additional services or call in services to farmers.

Finally, if KISAN focuses on further building the capacity of LSPs and change agents (in technical areas, business areas, and training) from the previous years, then they will be able to train other farmers; and if they have strong technical expertise that help farmers increase production and income, then they will more likely be able to earn income for offering their technical services.

Assumptions

- Farmers recognize the return on investment in agriculture, and they treat agriculture like an enterprise and investment (so they will pay for inputs);
- Literacy class is conducted in areas where farmers are more risk adverse and lack entrepreneurial skills;
- Key inputs (seed and fertilizer) will be available in time for the crop;
- SACCOs are interested in increasing their rate of return and will embed agriculture experts; and
- In areas where the farmers and others are not able to support privatized extension agents, the government will deploy well-trained extension agents.
- Irrigation facilities available throughout the year for vegetable production.

Strategy for improving high-value vegetable production

KISAN will narrow its focus to strengthen and expand existing production areas where the project has established MPCs and farmer groups, which will increase production for the MPCs. To ensure sustained technical support, KISAN will continue to provide trainings and TOTs to LSPs, agrovets, and MPCs so they can provide additional support to KISAN farmers and to new farmers.

KISAN will target off-season vegetable production with smallholder farmers in the Terai and hills. The project will train farmers in a variety of technologies for up to eight vegetables. Lead farmers will establish demonstrations so farmers can see the impact of the technologies and varieties.

The project will explore working with SACCOs and Agriculture Cooperatives to expand their membership and to ensure farmers have access to credit. KISAN will try to work with cooperatives to hire agriculture experts to provide farmers the training and support they need. KISAN will provide training to the agriculture experts.

MPCs will receive additional ongoing support through trainings, TOTs, exposure visits, and workshops to build relations and increase linkages.

Grants may be awarded to key input suppliers (irrigation technology supply chain) to develop marketing plans/materials and demonstration plots.

KISAN will also promote entrepreneur training and record keeping to LSPs, agrovets, MPCs, and farmers.

Activities

Farmers

KISAN will not provide direct training to farmers but instead will bolster the skills of others who can provide training and advice to farmers.

LSPs and change agents

1. TOT on high-value agriculture production (four to five days). This training will include key aspects of raising off-season (early and late) varieties of vegetables including:
    a. Demonstration of existing technologies in wider areas, for example poly-house technologies for off-season production (cucumber, bitter gourd, tomato), nursery raising, plastic tray, coco peat, plastic tunnel, mulching, plastic mulch for brinjal, cucumber, bitter gourd, and chili, soil fertility improvement, composting preparation, and vermin compost technologies.
    b. Extension of micro-irrigation and shallow tube well technology in the production pockets, for example, micro irrigation including drip irrigation for hills (14 sets per district), sprinkle irrigation, and shallow tube well for the Terai (15 sets per district).
    c. Capacity building for the commodity chain actors (3 per district), training on nursery management, production practices, and post-harvest technologies, packaging, grading, and storing (50).
    d. Basic farm business planning and record keeping (18 per district).
2. Entrepreneurship training for agrovets and LSPs (one day).

a. KISAN will provide agrovets and LSPs a one-day training on business planning that will involve how to develop a business plan, how to expand their business, and the advantages of embedding services (5 per district).

Marketing and MPCs

KISAN has helped work along the marketing commodity chain, primarily with Marketing and Planning Committees, which are comprised of farmers from the farmer groups, traders, agrovets, and sometimes government officials. KISAN plans to support existing MPCs and wholesale markets so that they will continue to support smallholder farmers. KISAN will not plan to develop any new MPCS given the limited time remaining in the project. KISAN will also identify other locally-based marketing opportunities so that the communities have improved access to vegetables.

1. Develop local market outlet (cycle vendor, push cart, ghumti, etc.) for vegetables.
2. Strengthen MPCs.
    a. Conduct TOT for MPCs on market-led production planning, how to prepare marketing schedules, understanding marketing and commodity chain marketing system, important market information, record keeping, and business planning. KISAN will encourage MPCs to provide training to farmers directly as a way to increase their productivity. The trainings will be three days, once per year (15 per district).
    b. At the district level, KISAN will conduct workshops with VDC secretaries to explore ways to collaborate with the project (dedicate infrastructure funds for market centers, use Village Block Fund, and other sources) (twice per year, six month intervals, per district).
    c. Help MPCs in registering with their respective DADO (district level).
    d. Conduct training on how to work as a cooperative, how to operate as a group (at district/cluster level).
3. Support all MPCs.
    a. Form and support Apex Body of MPCs/Traders at District or Regional level (four Apex Bodies) by conducting workshops and attending Apex Body's meetings (once per district with about 25 participants per workshop).
    b. Conduct three-day TOT for MPCs on post-harvest handling (packaging, transportation, storage, minimizing loss, grading, etc.) so they can share the information with their farmers (twice per district with about 20 participants per TOT).
    c. Share price information and other extension messages by radio and other media. (District/Cluster Level, seasonal)
4. Develop market linkages

a. Conduct exposure visits for MPC members (and agrovets, producers, wholesalers, cooperatives, local retailers, DADOs) to see more developed markets, practices, and improved infrastructure. This can be within districts or in other districts.

b. Conduct district-based workshop to link commodity chain actors (from input supply chain and market actors) and create linkages between farmers, farmers groups and wholesalers, vegetable processors, and super markets to assess supply and demand (one day per year with about 30 participants per workshop).

c. Explore developing contract/MOU between the MPCs or commercial farmers and wholesaler for the production of selected vegetables (District level). Assess formed MPC associations at the district and regional levels.

5. Link MPCs and commercial farmers and their groups to MFIs to increase access to credit. (DEPROSC)

6. Strengthen wholesalers/wholesale markets of major markets of KISAN farmers (Kohalpur, Nepalgunj; Attariya, Dhangud: Babund Sahahi Vegetable Market, Surkhet; and Mahendranagar, Kanchanpur) and develop their capacity by helping them improve their operations.

    a. Conduct training on enterprise development for wholesalers/traders (including business plan preparation). Explore interest and opportunity for wholesalers to invest in trainings and/or demonstrations of improved practices for farmers to achieve greater volume, quality, etc.

    b. Train wholesalers on post-harvest handling, grading, and standardization of vegetables. (District level)

    c. Provide technical assistance to wholesale markets to prepare strategic business plans and training on post-harvest handling.

    d. Explore working with SMARTHA wholesalers in training farmers.

Irrigation parts supply chain

All vegetable farmers need some way of irrigating their vegetable crops. In the hills, water needs to be lifted from streams (using electric or diesel pumps), collected from roofs, or carried from higher level water sources. In the Terai, water can be pumped from groundwater by using tube wells or treadle pumps. Once the water is collected, it is useful to store the water in ponds and/or plastic barrels so it can be used as needed for the plants. Gravity-fed drip irrigation is an efficient way to irrigate vegetables.

KISAN will work with the companies that manufacture and distribute drip irrigation materials, water barrels, water pumps, and hoses to develop marketing plans. KISAN will invite the companies to apply for a grant so that they may engage agrovets to establish demonstrations, and provide training to farmers on how to set up water storage and drip irrigation practices.

Activities

1. Conduct workshop with key manufacturers and distributors, including information on how to apply for grants.
2. Provide training in marketing.
3. Issue a grant.

SEED INPUT SUPPLY CHAIN

Overview

Seed and varietal replacement in Nepal is extremely low. Famers tend to reuse their previous crops seed, which significantly reduces productivity. Moreover, many of the seed companies are trading companies and lack the skills to increase production on their own. KISAN will increase seed production of rice, maize, and lentils within the Feed the Future Zone of Influence. The potential of cereal and lentil seed production is substantial due to the increasing demand for quality seed. New high yielding open pollinated varieties are available for seed production.

Key challenges on the input supply chain as related to smallholder production

- Seed companies are small and are primarily trading companies;
- Inadequate supply of breeder and foundation seed;
- Farmers lack technical knowledge on how to raise quality seed;
- The government lacks the Seed Quality Control Center (SQCC) inspectors;
- Poor post-harvest activities (cleaning and grading); and
- Lack of mechanization in seed production.

KISAN's theory of change and focus

If KISAN can help seed companies improve their marketing (packaging, quality control, etc.), and links them to seed cooperatives and agrovets in the KISAN districts, then seed companies will help seed farmers increase income while increasing the supply of improved seed (rice, maize, and lentil) that the companies can sell and increase overall improved seed availability in the region. To do this, KISAN needs to help increase the capacity of DADO staff that serve as seed quality control inspectors.

Assumptions

- Seed companies want to increase their business and reach;
- Foundation seed is available;
- Seed can be certified;
- Seed companies have the ability to expand;
- Fertilizer and other inputs are available; and

- Seed companies and seed cooperatives respect any agreements made.

Strategy for improving quality seed production

KISAN will focus its seed work in four Terai districts and five hill districts to produce commercial seed with up to seven companies and seed cooperatives (see Table XIII).

Table XII. Seed production and seed companies/cooperatives by district

District	Seed	Company
Kailali	Rice /Lentil	Unique Seeds and Pancha Shakti Seed Company
Kanchanpur	Rice /Lentil	
Bardiya	Rice /Lentil	Budhan Multipurpose Cooperative, Harikrishina Cooperatives
Kabilvastu	Rice	International Agro Seed Company
Pyuthan	Maize	Nepal Agroseed and Input Company and Beej Bridhi Company Pvt. Ltd
Dang	Rice /Lentil/Maize	
Surhket	Maize	Local cooperative
Salayan	Maize	
Dhadledhura	Maize	

The project will provide direct support to the seed companies to develop marketing plans and link them to agrovets in KISAN districts. The project will offer grants to seed companies to increase their marketing through agrovets and encourage seed companies, through agrovets to conduct demonstrations. The project will help identify, link companies to, and train seed cooperatives to produce seeds for the markets. Where appropriate, KISAN will introduce seed farmers to new technologies and machinery.

In the four hill districts, KISAN will help seed farmers join cooperatives and raise seeds for commercial production, focusing on maize.

To address the chronic shortage of qualified seed crop inspectors, KISAN will support GON and seed company staff on seed crop inspection through trainings. KISAN will also promote demonstrations for equipment that can help seed farmer's plant, harvest, and process seeds.

Activities

Seed Companies

1. Meet key seed companies and explore their interest in improving their marketing and linkages to agrovets in KISAN districts.
    a. Provide direct marketing planning assistance as needed.
    b. Release an RFA for which seed companies can apply to improve their marketing through demonstrations.

2. Link farmer groups and cooperatives to seed companies.

Seed Cooperatives and Farmers

1. Build farmers' capacity to produce quality seeds.
    a. Conduct one-day training on seed production for seed growers at the community level. Training will be provided at the time of sowing, flowering, and harvesting.
    b. Conduct three-day residential training at the cluster level for lead farmers of seed production groups for each crop (maize, rice, and lentils). The training will focus on isolation distance, sowing practices, seed treatment, agronomic practices, identifying off-types and removal, maintenance of seed plots, plant protection measures, maturity status and harvesting methods, seed cleaning, grading, seed treating, bagging and storage aspects, seed sampling, and sending to seed testing laboratory for analysis. In each training, 25-30 people (one per cooperative/group) in each cluster will participate (two trainings per cluster/seed crop).

GON

KISAN will provide training to DADO staff to build their capacity to be crop inspectors, which is required for all commercial seed. Regular crop inspection will be done by using project staff and SQCC. Rouging will be carried out as and when required. KISAN will conduct this seven-day residential training for DADO staff one per year with about 20 participants.

Super Bag/PIC Bag Distributors

Good post-harvest management for seeds and grain can increase the productivity by reducing losses. There are several products on the market that are inexpensive and effective for both grains and seed. KISAN will meet the Super Bag and PIC bag distributors and discuss grant opportunities to improve marketing and demonstrate their bags to farmers.